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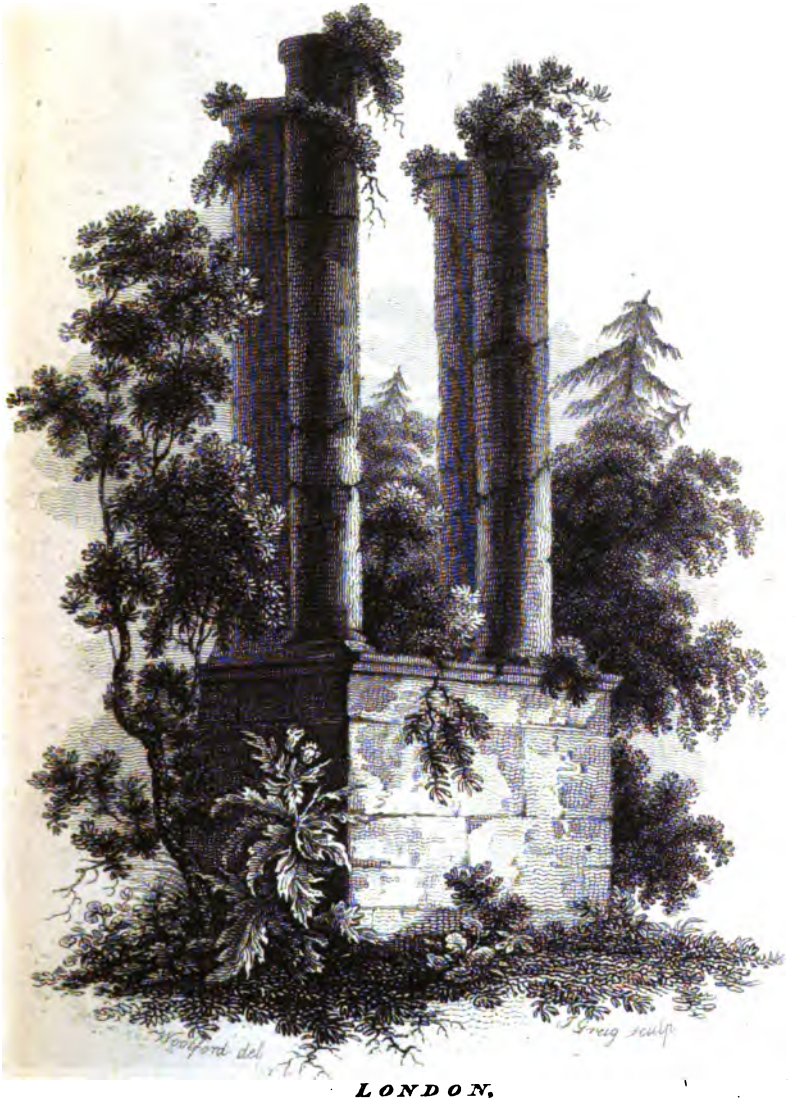
VOL. III.



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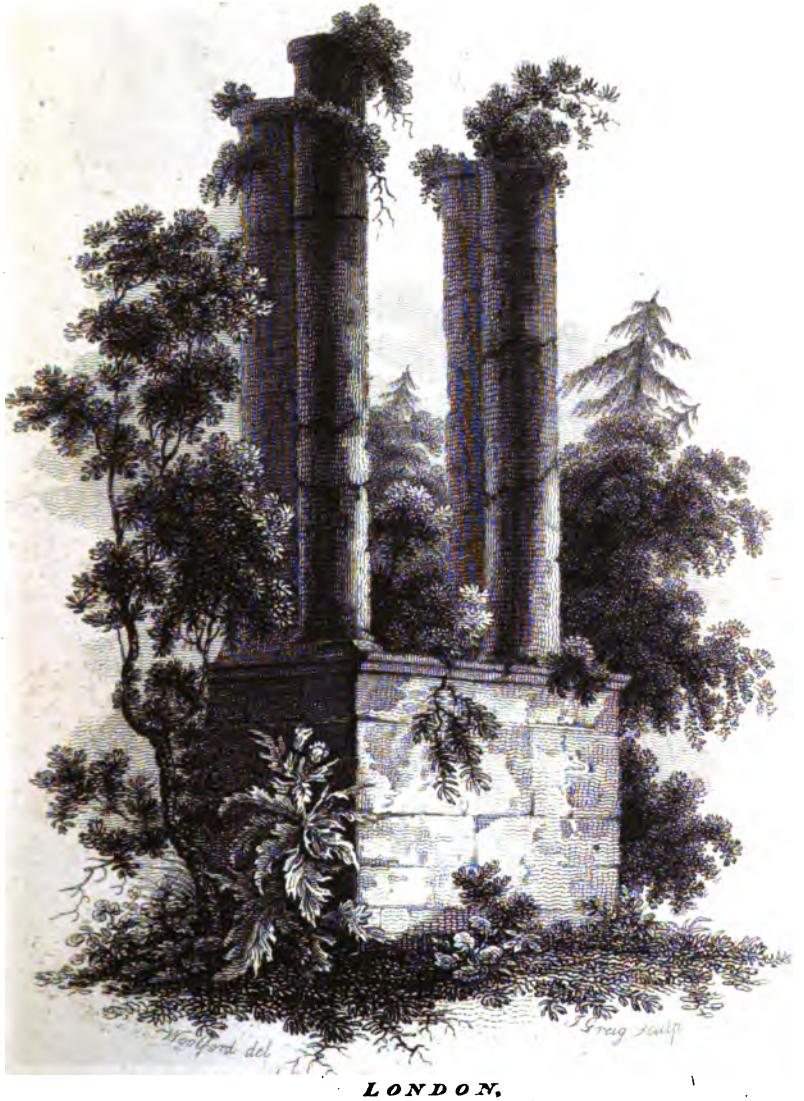

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THE

BEAUTIES

OF

SCOTLAND:

CONTAINING

A CLEAR AND FULL ACCOUNT

OF THE

AGRICULTURE, COMMERCE, MINES,

AND

MANUFACTURES;

OF THE

POPULATION, CITIES, TOWNS, VILLAGES, &c.

OF EACH COUNTY.

EMBELLISHED WITH ENGRAVINGS.

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TO THE

MOST NOBLE

THE

MARQUIS OF

DOUGLAS AND CLYDESDALE.

My Lord,

This Volume is respectfully addressed to your Lordship as an accomplished and a patriotic Nobleman, who does honour to the highest rank, by the cultivation and the patronage of literature, and of those arts which form the best ornament of human society.

I have the honour to be,

My Lord,

Your Lordship's most obedient

And most humble Servant,

RO. FORSYTH.

THE

BEAUTIES

OF

SCOTLAND.

RENFREWSHIRE.

THIS is a small county; but it contains a very considerable population. It is bounded on the south-west by the hills which run along the north-eastern or northern part of Airshire; towards the west, the north, and partly towards north-east, it is bounded by the river Clyde, or the territory nearly adjoining to it; and on the east, it is bounded by Lanarkshire without any particular natural line of separation. In general, and especially along the north-eastern and northern part of it, it is a low, and upon the whole a level territory. In this respect, however, there are many exceptions, especially towards Airshire, from the vicinity of which the greater number of its waters descend. There are few hills in the county that rise to a remarkable height. Some of them, however, upon the borders of Airshire, are of considerable elevation. In the parish of Eaglesham, the hills of Balagich and Dunware are nearly of the same height; their summits are about 1000 feet above the level of the sea. In the parish of Nielston is a hill called the *craig of Nielston*,

Boundaries and aspect.

Hills.

Waters. which makes some figure, as standing by itself, and not forming part of a ridge or tract of country; it is 820 feet above flood-mark, and is all green and arable to the top. In general, however, the chief hills in the county are those adjoining to Airshire, which form a tract of bleak and elevated ridges rather than of remarkable mountains. From the summits of these heights, in some situations, a fine prospect is seen. On the south and west is the fertile vale of Cunningham, which seems at a distance covered with woods, and which is washed by the Frith of Clyde, whose broad waters seem to extend towards the setting sun, unless where the view is intercepted by the western isles, seen in the remote horizon. The mountains of Carrick and of Galloway can also be seen on the one hand, while towards the north-east the city of Glasgow and the low country of Renfrewshire are beheld; beyond the last of which Ben Lomond lifts his head, often covered with snow, to the clouds.

Waters. The waters of this county are of no great magnitude in themselves; but by the industry and enterprise of the inhabitants of the adjacent territory, they are rendered of considerable importance to society. Unlike the romantic waters of Airshire, the Doon, the Lugar, the Girvan, and the Air, which flow between woody banks in pleasing solitude, or are adorned by the vestiges of past, or the buildings and works reared by present magnificence, the streams of this district are everywhere rendered instruments of human industry, and made to toil for man. If they descend suddenly from a height, it is not to form a pleasing cataract, to give variety to the beauties of a park, or to please the eye or the ear with the wild and beautiful scenery which nature sometimes delights to exhibit, but to turn some vast water-wheel, which gives motion to extensive machinery in immense buildings, where hundreds

of human beings toil in the service of luxury, or form the materials which are to furnish clothing to distant nations. Here, if a stream spread abroad its waters, it is not to form a crystal pool, but to be subservient to the more vulgar, but more useful purpose of affording convenience to a bleach-field, or a reservoir for machinery in case of a want of rain. In proportion as we approach towards Glasgow, the great theatre and centre of Scottish manufactures and commerce, every thing assumes an aspect of activity, of enterprise, of arts, and industry. The principal streams here found are the White Cart, the Black Cart, and the Grif; all of which ultimately unite together, and fall into the Clyde below Inchinnan bridge; that is, about half-way down the river between Glasgow and Port Glasgow. The White Cart, which generally receives, by way of eminence, the name of the *Cart*, runs in a direction from south-east to north-west, somewhat parallel to Clyde; it takes its rise in the high grounds or moors of East Kilbride in the county of Lanark, and of Eaglesham in Renfrewshire. It passes the town of Paisley, and thereafter joins the Grif at Inchinnan bridge. In the Cart are found perch, trout, flounders, and braises or gilt-heads, but none of them in any considerable quantities; owing no doubt, in a great degree, to the bleachfields, print-fields, and a copperas work upon the banks of the river. As for the fine large pearls once found in this river, and which, according to our old historians, had been noticed by the most eminent jewellers in Europe, they have long disappeared; and the river has become a more certain source of wealth by its utility to an industrious and manufacturing neighbourhood. In its upper part, the White Cart passes through a country in which are a variety of small hills capable of being cultivated to the top. Among these the Cart winds its way in a very irregular

Waters.

White Cart.

Water. course, sometimes disappearing altogether by the steepness of its banks, and again spreading its waters abroad into the plain. Below Paisley it is of such depth as to be of importance in navigation. It was, by direction of the magistrates of Paisley, surveyed by Mr Whiteworth in 1780. He reported, that by removing some rocks and shoals in the river, a depth of seven feet of water might be obtained in ordinary spring-tides; and as the channel is but shallow under Inchinnan bridge, as it could not be easily or safely deepened there, and as at any rate vessels with standing masts could not pass under the arches, he proposed to avoid that part of the navigation by means of a navigable canal, which should leave the river a little above, and join it again below the bridge. The expence of the whole, including a drawbridge across the canal, was estimated at L. 1900. The plan being approved of, an act of parliament was obtained, empowering the magistrates and other trustees to carry on the work, and defray the expence by a tonnage of eightpence *per* ton upon all vessels navigating the Cart, with an exception in favour of those loaded with coal. The work was completed; but it was not successful to the degree that had been expected.

Black Cart. The Black Cart rises out of castle Semple loch, in the parish of Lochwinnoch. It is a beautiful lake, extending to above 400 acres, in which there are abundance of pikes and eels; it also abounds with swans, geese, ducks, teals, bitterns, and other fowls which frequent standing waters. Its beauty is greatly increased by a considerable quantity of wood in its vicinity. As already mentioned, the Black Cart descends northward towards Inchinnan; but before arGrif. riving there, it meets the Grif. This last stream has its source in the elevated territory above Largs, which looks down upon the angle formed by the Frith of Clyde. In turning from a westerly to a southern direction, it is compo-

sed, like the others, of a great variety of small streams, and at first flows rapidly, descending over several precipices, till it reach the low country at Fullwood, where it meets the tide. Thereafter it glides slowly in a serpentine course, uniting with the Black Cart at Moss Walkinshaw, and the White Cart at Inchinnan bridge; after which it enters the Clyde a mile below Renfrew. At the confluence of the Grif with the White Cart is the bridge of Inchinnan, a fine building, consisting of ten large arches. From about the centre of the bridge a large arch is thrown over towards the highway that leads to Paisley. Waters.

In this county the augmentation of lakes, considered as reservoirs of water for giving motion to machinery, has been considered as an important object. Thus in the parish of Nielston, a flat piece of territory, through which a streamlet flowed, being obtained in lease by the owners of several bleachfields, they erected a breastwork of sixteen feet in height. The springs above this being numerous, by the aid of a level surface, a tract of a mile in length, and half a mile in breadth, was overflowed; so that during the greatest droughts of summer (which, however, are seldom distressing in this quarter), by drawing the sluice three inches, a powerful stream is obtained. There is a natural lake in the same neighbourhood, covering sixteen acres of land, surrounded by extensive plantations of every sort of forest trees, belonging to Mr Muir of Caldwell. We have already mentioned castle Semple loch. In the same parish of Lochwinnoch is Queenside loch, situated in a high and wild part of the country. It extends over a surface of about twenty-one acres. The principal use which is made of it consists of employing it as a reservoir for supplying occasionally some cotton mills. Indeed wherever a stream of water is found, it is scarcely possible to travel far without finding it interrupted by cot- Lakes.

Agriculture.

ton mills, or its banks occupied by bleachfields. With regard to the river Clyde, which forms a part of the boundary of the county, it will more naturally be brought into view when we come to treat of Lanarkshire.

Rather commercial than agricultural.

Upon the agriculture of this county we shall not find it necessary to make many remarks. The country in general assumes a favourable appearance, in consequence of a crowded population, together with numerous enclosures, and the abundance of manure from towns in the vicinity, which can here be easily obtained. At the same time it is in vain in this quarter to inquire for farmers of great skill, ingenuity, and enterprise. The tardy mode of attaining to a competency, or to wealth, by the slow path of perseverance in the laborious pursuits of agriculture, is ill suited to the temper of men in this quarter of the country. Commerce and manufactures have here so frequently been pursued with success, and proved the source of great and sudden riches, that every mind is less or more occupied by them; and every restless, ambitious, or ingenious individual turns to them, as the path by which he may most readily attain to opulence. Agriculture therefore is left in the hands of gentlemen, who wish to adorn, by enclosures and plantations, and a cultivated appearance, the lands around their mansion-houses; to merchants, who have erected villas upon small farms, upon a few acres which they have purchased for the purpose of erecting a villa, or place of temporary retreat for their families from the confinement of a city; or, lastly, the soil is left in the hands of those unambitious individuals who are contented, in the character of farmers, to occupy the station and the employment which their ancestors held in society.

Much grass.

Although much of this county is well suited for being kept almost constantly under arable crops, by the aid of

the manure which can here be obtained, yet the demand for the products of the dairy is so great, in consequence of the vicinity of trading and manufacturing towns, that an uncommonly large proportion of the soil is kept constantly in grass. Thus the cultivator here does that voluntarily which in other quarters of the country his landlord finds it necessary to compel him to do by anxious stipulations in his lease, that the land may not be utterly exhausted by corn crops. Here the farmers have no objection to the immense importations of grain which are continually taking place upon the Clyde; because they do not envy the inhabitants of less populous districts, who find no better employment for their lands than that of scourging them by endless crops of grain. One would imagine that the practice of this district ought of itself to decide the question concerning the propriety or impropriety of a free commerce of grain. The free importation of corn, by affording it at a cheap rate, augments population; and among an industrious people an extensive population augments the value of the soil in every point of view; it encourages the rearing upon it of the least exhausting and most valuable produce, which cannot be brought from a distance, and it increases the price of the land in case of a sale. Agriculture.

The lands here differ chiefly according to their vicinity to the Clyde, or, in the lower part of the county, according to their vicinity to the waters of Cart. They are in general well enclosed, and in good condition for supplying the towns. Potatoes usually form a part of every rotation. The common one is: 1*st*, Oats from grass; 2*d*, Potatoes or barley dunged; 3*d*, Oats with five pounds of red clover and three firlots of rye-grass; 4*th*, Hay for two years; 5*th* and 6*th*, Pasture; the last covered with compost manure. Rotations.

Agriculture.

In the parish of Eastwood, and part of the parish of the Abbey of Paisley, the lands are beautifully interspersed with small rising hills, although the soil is generally of a thin clay. The continued demand for every commodity that grass can produce, induces the farmers to have about one-half only of the land in tillage; and that half seems to be ill managed. A common rotation consists of two crops of oats followed by one of barley, two of hay, and five of pasture. The upper district of the county includes the contiguous parishes of Mearns, Eaglesham, Neilston, Lochwinnoch, Kilbarchan, Erskine, and Kilmalcolm, all which have a striking similarity of soil, rotation of crops, &c. The farmers have seldom more than one-third in tillage; the remainder is kept in pasture for milk cows. Though the lands in these parishes seem peculiarly well adapted for sheep pasture, none of them are so well occupied, excepting some enclosures about gentlemens seats, and some parks in the parish of Nielston, the property of Mr Speirs of Elderslee. The parish of Mearns is almost unequalled for numerous, beautiful, grass knolls (small green hills).—They make here large quantities of fine butter. Their cows are small, of a brown and white colour, chiefly from Airshire. Twelve of these small cows will yield for four or five months in summer one hundred and twenty Scotch pints of milk each day; which churned milk sells at one halfpenny *per* Scotch pint; and for the months in autumn their milk, though in the usual proportion diminished, increases in value by one farthing *per* pint, besides more and better butter; their butter being all made from milk they churn every day in summer, in autumn four times a-week. Their hand-churn holds near two hundred pints, which they only half fill to give air. The staff, having three wings, turns with a handle like like corn fanners. When they

can command water, they make use of it for churning; the churn lying horizontally, which saves the labour of two servants. Towards the northern part of the county, in Kilmalcolm parish, the lands are generally enclosed with dry stone-dikes four feet high. In summer, before ploughing up their grass grounds, the cattle are there kept in folds. The dung of the farmyard is then added for manure; and if not sufficient to go over the whole field, the remainder is covered over with a compound of earth and lime. The field is ploughed about the end of March for oats, which are a good crop the first year, the second not so good, the third very poor. By these three successive crops of oats the land is very much exhausted; and in that state, without grass seeds, it is kept in pasture for six years, when the same rotation succeeds. All this is obviously sufficiently barbarous. Agriculture.

The proprietors of this county have liberally and zealously contributed to the making of excellent roads, and care is taken to preserve them in the best order. Still-yards are fixed at every toll-bar to prevent carts being overloaded. Fifteen hundred weight is allowed in the neighbourhod of Paisley for a cart with one horse. The ploughmen are all unmarried, and live in the farmers houses. In summer they begin to work at five in the morning, and finish at six in the evening. In winter the hours of working are from seven to four. The ploughmen, however, were formerly employed in thrashing two hours or more before day-light during winter; which practice was general throughout this country, but gives way to thrashing machines. The horses are of the best kind, and draw in a single horse cart from 1700 cwt. to a ton. A few of them only are bred in the county; the rest are purchased from Lanarkshire and Airshire at five years old, sixteen hands in height. Their one horse carts are very neatly made, and mostly with iron axles. The shafts of the Roads.

Minerals. carriage are about nine feet seven inches in length, depth of the cart two feet, width four feet, not sloped from below in general. The farms here are much too small, extending only to from fifty to seventy acres; a circumstance which renders it idle to expect that great agricultural improvements can take place among the farmers, because men of an enterprising character evidently will not confine themselves to such an employment.

Minerals. Valuable minerals are not extensively diffused over this county; but in the neighbourhood of Paisley they are extremely abundant. No coal has been found near Greenock or Port Glasgow, nor in the hilly part of the country. Various minerals, however, have been discovered in different quarters. In particular, it may be remarked, that in the parishes of Eaglesham, Kilbarchan, and others, there has been found what is called the *osmund stone*. This remarkable stone, which is universally known all over the country, is of various colours; as gray, brown, whitish, &c. It is generally so soft, when lately quarried, that it may be cut with a chisel, but afterwards becomes much harder. It breaks in all directions; the surfaces are unequal and harsh to the touch. It readily absorbs water; and if recently heated in the fire, the absorption is attended with a hissing noise. The acids do not affect it; nor are the brownish-coloured kinds destitute of iron in its calciform state. The osmund stands a very great heat without being rent or melted; for which reason it is used for ovens, furnaces, &c. where a strong and constant heat is necessary. But when used for paving ovens, care must be taken to have it all of the same kind; for if one stone be more dense than another, the bread will be unequally fired. From want of this precaution several ovens have been rendered useless, and the stone held in disrepute. In some specimens a great va-

Osmund stone.

riety of small stones of different substances, colours, and shapes, are closely cemented together. The greatest part of the osmund, when burnt, assumes a darkish colour, and loses three *per cent.* of its weight, but afterwards regains it by absorbing moisture from the atmosphere. Some of it is considerably porous, and almost semivitrified. In this case it has, when struck, a strong and clear sound. The pores in some specimens are pretty large. The osmund is found in large masses in the form of rocks; and in some places it has the appearance of stratification. In many places, as at Kilmalcolm, it is found below whin-stone, with hardly any other kind of substance intervening. The pores and crevices are in some specimens filled with filaceous, and in others with calcareous spar, and sometimes with zeolite. A white steatites is lodged in the crevices of this stone; and in the parish of Eaglesham a great quantity of the ponderous spar is interspersed in it. Not unfrequently these two substances are beautifully intermixed; and in many specimens large fragments of osmund are imbedded or insulated in the barytes. It has been thought probable that the osmund is a volcanic production. Minerals.

In the parish of Eaglesham also, at Balegich hill, barytes has been found; and in the same neighbourhood are two mineral springs: the one is of a purgative quality, and in some complaints of the stomach is said to give immediate relief. The water of the other is often carried to a great distance, as a remedy for what is called the *moor-ill* in black cattle. But the most remarkable field of minerals in this county is that in the neighbourhood of Paisley; which extends, on the one hand, into the parish of Kilbarchan, and on the other hand towards Glasgow. That which is most singular is the coal at Quarreltown, which is undoubtedly one of the most extraordinary mass- Mineral spring. Quarreltown coal.

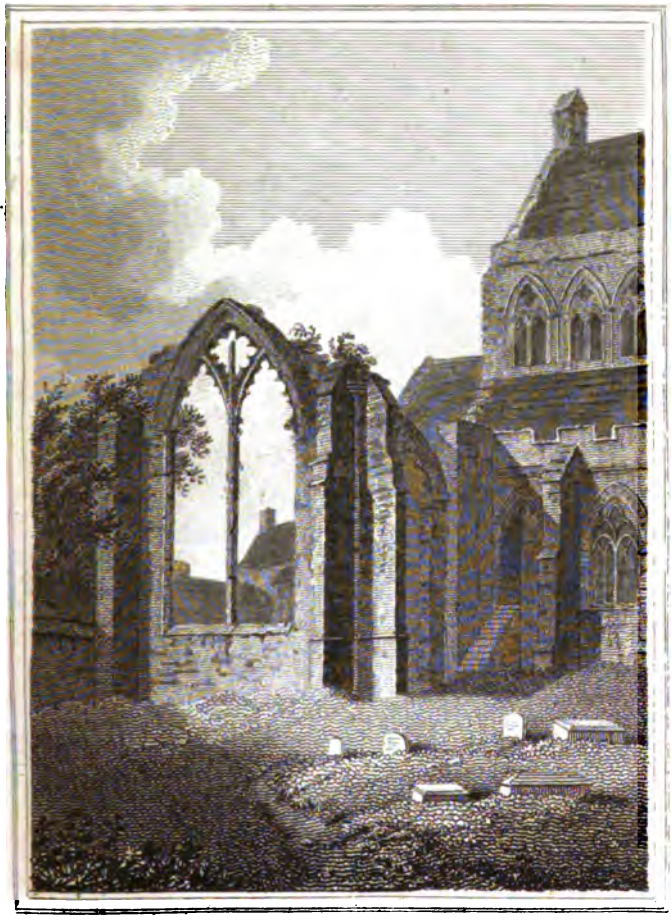
Minerals. es of that mineral that has hitherto been discovered. The thickness of the whole, measured at right angles to the surface of the bed of coal, is upwards of fifty feet; but as in some places it is found in an oblique direction, the thickness of the whole, in these places, measured in a line perpendicular to the horizon, is about fifteen fathoms. It consists of five layers or strata in contact with each other. In consequence of its enormous depth, it is wrought in different floors in the mode practised in great open quarries. Till of late the work was carried on *horizontally* from the shaft, so as successively to intersect all the five strata. At present the miner pursues the same stratum rising with it. In the former mode of working, there were five several floors or stories; in the present, there are only three; the first, third, and fifth stratum being wrought, and afterwards so much of the second and fourth as may be done with safety. It is difficult to convey a clear idea of the manner in which this singular mass of coal lies. In a field of about fifteen acres it is found to dip in several different directions. At least, conceiving a nearly circular area of these contents, the coal, from the north, the east, and south quarters of that circle, dips pretty uniformly towards the centre. This, however, is in some measure interrupted by several hitches; at one of which the mass of coal is suddenly thrown up about fifty feet, at another about thirty. These hitches interrupt not only the direction but the degree of the dip. On one side of the first mentioned hitch it is about one foot in three, on the other side only one in six. Some years ago the coal took fire; and the pillars giving way, the ground sunk, and left the surface in a very rugged state. The difficulties thus produced, however, were surmounted, and this mineral treasure restored to all its utility.

About three miles south-east from Paisley is the Hawk-head coal, which is five feet three inches thick, and is supposed to have been wrought for more than 200 years. Inflammable and fixed air are met with in this mine; but as great care is taken to ventilate the workings, accidents are not frequent. In all such mines care ought to be taken to clear the workings of bad air, by the very simple operation of keeping a small fire burning in a furnace at the surface, fed with air by means of a tube of any materials let down to the suspected spot. As inflammable air ascends, or the fire damp, as it is called, and fills any concavity that may be left in the upper part of a mine, while fixt air or the choak-damp sinks to the bottom, an apparatus would be necessary to counteract the bad effects of each; the tube intended to remove inflamable air terminating below ground in the upper part of the mine, and that intended to remove fixed air terminating at the bottom. Minerals. Hawkhead coal.

There are several limestone quarries in the same neighbourhood. One belonging to the Earl of Glasgow is most worthy of notice. An enormous rock, projecting from the brow of a hill, contains the limestone lying in a mass of about ten feet thick, and dipping towards a centre like the Quarreltown coal. Several mines have been driven into the rock; and these meeting in the heart of it, present a very singular piece of subterranean scenery. The coal in the parish of Kilbarchan is not so valuable as those already noticed, and is chiefly wrought for the purpose of calcining lime; but on the other side, towards Glasgow, it is of more importance. In the parish of Cathcart, coal is found under almost the whole lands to the extremity of the county towards Govan in Lanarkshire, where a great coal-work is carried on. Lime is also found here in abundance; and also, along with the coal, considerable quantities of iron-stone are brought to the Lime. Kilbarchan coal.

Antiquities. surface. But we shall take farther notice of the great field of minerals upon Clyde when we come to consider the county to which that river more particularly belongs.

Paisley abbey. Several curious vestiges of antiquity are to be found in this county. The most important of these is the abbey of Paisley. It was founded as a priory for monks of the order of Clugni, by Walter, son of Allan Lord High Steward of Scotland, in the year 1164. It was the common burial-place of that family till they became kings of Scotland. The monks of this place are supposed to have written a chronicle of the affairs of Scotland, called the *Black Book of Paisley*, from the colour of its cover. This curious monument of antiquity, cited frequently by Buchannan, belonged to the President Spottiswood; and after his death was carried into England by General Lambert, and is now in the king's library at St James's. George Shaw, abbot of this place, in the year 1484, enlarged and beautified this monastery. He built the refectory and other offices necessary for the monks, the church and the precinct of the convent; and enlarged the gardens and orchards, which he enclosed with a wall of hewn stone, measuring about a mile in circuit. Concerning this wall Mr Pennant makes the following remark: "The garden-wall, a very noble and extensive one, of cut stone, conveys some idea of the ancient grandeur of this place. By a rude inscription still extant on the north-west corner, it appears to have been built by George Shaw the abbot in the year 1484; the same gentleman who, four years afterwards, procured a charter for the town of Paisley. The inscription is too singular to be omitted.



PAISLEY ABBEY.

Antiquities.

Thy call it the abbot George of Shaw
About my abbey gart mak this waw;
An hundred four hundredth zeir
Eighty-four the date, but weir
Pray for his salvtie
That laid this noble foundation."

The abbey church appears to have been, when entire, a very grand building: it was in the form of a cross. The great north window is a fine ruin, the arch very lofty, and the middle pillar wonderfully light, and still entire; only the chancel now remains, which is divided into a middle and two side aisles by lofty columns, whose capitals are ornamented with grotesque figures, and supporting Gothic or pointed arches. Here are two ranges of pointed windows, the upper ones remarkably close to each other. Both the west and north doors are highly decorated with sculpture: indeed the whole outside has been highly ornamented. Of late years it has been fitted up for parochial service. During the tempestuous period which preceded the reformation, John Hamilton bishop of Dunkeld, and afterwards archbishop of St Andrew's, was abbot of this monastery. He resigned it in 1553 in favour of Lord Claud Hamilton, who, though said in the bull granted by Pope Julius confirming the transaction to be fourteen years old, was in truth only a child of ten years of age. This Lord Claud was third son of James Duke of Chatelherault, governor of Scotland. He adhered to Queen Mary's interest, and was at the field of Langside in the year 1568, for which he was forfeited: And Paisley, thus in the hands of the crown, was bestowed by the regent upon Robert, son to William Lord Semple, heritable bailie of Paisley, and justiciary of that regality. But Lord Claud being afterwards restored from his

Antiquities. forfeiture, was, in the year 1591, by the favour of King James the Sixth, created Lord Paisley. His son, James Earl of Abercorn, A. D. 1592, granted the abbacy of Paisley to the Earl of Angus; by whom it was alienated, in the year 1653, to William first earl of Dundonald. In his posterity it continued till the year 1764, when the late Earl of Abercorn repurchased this paternal inheritance of his family.

Remarkable echo. The Marquis of Abercorn's burial-place is celebrated for a remarkable echo. It is thus described by Pennant: "The "Earl of Abercorn's burial-place is by much the greatest curiosity in Paisley; it is an old Gothic chapel, without pulpit or pew, or any ornament whatever, but it has the finest echo perhaps in the world. When the end door, the only one it has, is shut, the noise is equal to a loud and not very distant clap of thunder. If you strike a single note of music, you hear the sound gradually ascending till it dies away as if at an immense distance, and all the while diffusing itself through the circumambient air. If a good voice sings, or a musical instrument is well played upon, the effect is inexpressibly agreeable." In the chapel is the monument of Margery Bruce. She lies recumbent, with her hands closed, in the attitude of prayer. Over her was once a rich arch with sculptures of her arms.

Clochodrigstone. In the parish of Kilbarchan, about three-fourths of a mile from castle Semple, is one of these monstrous pieces of whin-stone, believed to be a Druidical altar; the shape is roundish, but irregular. It is twelve feet in height at the highest part, and about sixty-seven in circumference. It is known by the name of *Clochodrigstone*, a corruption of the Gaelic *Cloch a druigh*, the *Druids stone*. It is of the same sort of whin-stone of which the neighbouring hills are composed, and has probably been hewn from an elevated rock to the eastward, on which is a farm-house,

called also *Clochodrig;* but by what mechanism it was brought thither cannot, in the present state of the mechanical arts, be imagined. It seems to rest upon a narrow base; but the lower part of it has been covered with stones gathered from the land, and over these stones grass now grows. At some distance are to be seen some large grey stones; but whether these once formed part of a sacred circle, similar to those which we have already so often described, cannot now be ascertained. Antiquities.

When reflecting on these vast masses of rude rock, which have evidently been set up by art, in so many quarters of Scotland, at a period of such remote antiquity as to set both history and tradition at defiance, it is impossible to avoid putting the question, By what sort of men they were reared? They are ascribed to a religious cast or order called the *Druids;* but this explains nothing. How came it to pass that these Druids should possess, in remote, and, as we think, rude times, a degree of mechanical skill which is now utterly unknown? Some of these enormous pillars are erected on high mountains; and some of them, as Stonehenge in England, have ponderous blocks of stone raised aloft, and resting on the tops of the upright pillars. No mechanic, architect, or artist, in our days, would attempt to raise from the quarry, to transport, or to erect, masses of rock similar to these, which the Druids have in such abundance left standing in a vast variety of situations of Britain and its isles. However singular it may seem, or inconsistent with the notions which the present nations of Europe are accustomed to entertain of their own superiority, it is certainly true, that some important mechanical power, or art of elevating and transporting enormous weights, was once known to mankind, but has been lost perhaps for some thousand years. These great and rude pillars in our own country Remarks on Druidical monuments.

Antiquities. remind us of the architecture of ancient Egypt, whose monuments remain indestructible but by a convulsion of the whole frame of nature. Such, certainly, is a temple of upwards of two miles in circumference, constructed of stones from fifteen to thirty-six feet in length, supported by columns fifty feet high and twelve in diameter, and adorned with obelisks of a single stone one hundred feet in elevation, and with collossal statues measuring from fifty feet to eighty. These fabries were evidently erected by an order of priests, who confined the efforts of their extraordinary mechanical skill to the service of their own body in the construction of temples. A late traveller in Egypt (Denon), after wandering among these stupendous remains, and having seen a village of three thousand souls, which appeared as nothing, because erected amidst the vast courts and galleries of the corner of an ancient temple, makes the following remark: "Still temples, nothing but temples! and not a vestige of the hundred gates so celebrated in history; no walls, quays, bridges, baths, or theatres; not a single edifice of public utility or convenience! Notwithstanding all the pains which I took in the research, I could find nothing but temples, walls covered with obscure emblems and hieroglyphics, which attested the ascendency of the priesthood, who still seemed to reign over these mighty ruins, and whose empire constantly haunted my imagination." Were it possible that, in these early times, the Druids of the West could have had any communication with the priests of Egypt, we might conceive the origin of their superstition, and of their mechanical skill. Accordingly, a conjecture of this sort has been made. Pythagoras is known to have travelled into Egypt, and to have obtained the privilege of initiation into those mysteries which the Egyptian priesthood concealed from the bulk of mankind, and which they

communicated only with the most mysterious solemnity. Antiquities.
Pythagoras afterwards settled at Crotona in Italy, and established a secret association, with words and signs like that of the modern free masons, by which the members might distinguish each other. The association was of a philosophical nature; it spread over Italy and Sicily with wonderful celerity; and wherever its members attained to sovereign power, the government was mild, and the people prosperous and happy. One hypothesis concerning the Druids is, that in the year 550 before Christ, which was posterior to the Pythagorean establishments, a colony of Phocians imported into Gaul the philosophy and the arts of Greece, and that the Druids were established by them. Accordingly, Ammianus Marcellinus (lib. 15. cap. 9.) informs us, "That the Druids were formed into fraternities, as the authority of Pythagoras had decreed." And indeed, the similarity of their philosophical tenets (as detailed in Henry's History of Great Britain, vol. ii. b. 1. chap. iv. 8vo.) to these of the Pythagoreans, authorises us to conclude, that they borrowed from this philosopher their forms and mysteries, as well as their religious and philosophical opinions. Cæsar also informs us, that the Gauls used the Greek letters in their public transactions, accounts, and calculations; a circumstance which affords countenance to what has been now stated. Were we to suppose a superstitious association like the Druids, residing amidst a barbarous people, to have been able to preserve, by tradition and practice, some extraordinary branch of mechanical knowledge obtained from a more enlightened people, it seems evident, that the only use they could make of it would be to construct fabrics, which might establish their power by exciting the admiration of the populace. From the total want of other arts, it might be impossible to erect regular buildings like

Antiquities

those of Egypt; but it might be in their power to rear these monstrous pillars, which could not fail to bestow on them, among a simple people, the character which they boasted of, *magicians*, seeing their operations are absolutely unaccountable to the most enlightened men of our own days. After all, these are mere conjectures concerning the origin of the vast pillars of which we now speak; but the reality of their existence demonstrates that much is yet to be known in that valuable art, by which man is enabled to wield and to dispose of the material objects by which he is surrounded.

Field of Langside.

In the parish of Cathcart lies the field of Langside, memorable for being the scene of the last effort of our unfortunate Queen Mary to regain her authority. The place where the battle was fought is an eminence; the ground gradually rises to a considerable height on the south and east sides, but descends pretty rapidly toward the north and west. Hence it is easy of access in the first of these directions, but on the other is steep and difficult. On the summit, and rather inclining to the north side of the hill, there is a circular or elliptical enclosure about 360 feet in circumference, which it would appear had been a small Roman encampment. By most of the historians, and by the editors of Cambden's Antiquities, it is mentioned as a place of this kind. The spot is commonly called *Queen Mary's Camp*. But it is well known that no encampment was made by either party in this more recent period of history. Murray the regent having drawn his forces from Glasgow on the same day on which the engagement happened, made a stand here, in order to intercept the queen in her progress to Dumbarton, when a skirmish ensued; the queen's party was routed, and a considerable number of her friends killed, but many more were taken prisoners in the pursuit. A place is yet

pointed out, upon an opposite eminence, fully in the view of the field now described, and near the old castle of Cathcart, where Mary stood till the affair was decided. A hawthorn bush, commonly known here by the name of *Queen Mary's thorn*, marked out the spot, till it decayed through age; but another has lately been planted in its place, to preserve the memory of these circumstances. Antiquities.

On the other side of the hills near which Clochodrig stands is an old narrow castle, which in former times was the residence of the family of Knox, from a branch of which our celebrated Scottish reformer was descended. Near the castle, on an elevated rock by which it is overlooked, is one of those green hills of forced earth, usually called *moats*; several of which, in other quarters, we have already described. This artificial hill is here called the *Castlehill*. It is of a square form, the sides facing the four cardinal points: the west side rests on the precipitous edge of the steep rock; the three remaining sides have been defended by a trench dug out of the solid rock. Each side of this hill is about thirty yards in length at the bottom, and nineteen at the top. It is seven yards in height. The top appears to have been a hollow square, surrounded by a parapet, and having an entrance on the eastern side. No less than five other artificial mounds of earth can be seen from it. There was an ancient Roman camp at Paisley, distant about six miles; and of the site of the camp this mount commands a full view. It may perhaps have been an out-post belonging to the camp. On the top of another hill, called Barhill, are the remains of a rude encampment. It is on the summit of a precipice, formed of perpendicular rock of a basaltic appearance, by which it is defended on the north; and on the south it has a parapet of loose stones. The tradition in the neighbourhood is, that it was an encampment of Castle, moat, camps, &c.

Antiquities. the celebrated Sir William Wallace. The pinnacle of rock is shown where they say Wallace sat while he enticed the English forces into a bog at the bottom of the rock, where they were all destroyed; but no historian confirms this statement.

In an island of Castle Semple loch is still to be seen the Pail or Peel, an old castle, to which the lairds of Semple were accustomed to retreat in times of unusual danger. Canoes have been found in the adjoining lake, hollowed out of single trees, after the rude manner of the Indians.

Castle of Newark. Lower down the country the remains of the castle of Newark deserve attention. They are lofty, and not destitute of magnificence. The castle stands on the eastern point of the bay which contains the town and harbour of Port Glasgow and Newark. It is now in ruins; but some part of it was inhabited about fifty years ago. It consists of a square court, with high walls, round turrets and battlements. Over the main door are the arms of Maxwell, very much defaced, having beneath them this inscription, "The blessing of God be hereon, *anno* 1597." On another part, on one of the north windows, is engraved the date 1599. Over most of the windows are the letters P. M.; being the initials of Sir Patrick Maxwell, who probably built the modern part of it. The tower is of more ancient date than the rest; when or by whom it was built is not known. This castle is the property of Lord Belhaven, in whose family it has been for a considerable time. It was formerly the castle or principal mansion-house of the barony of Finlaystoun Maxwell, which about the middle of the fifteenth century, with divers other lands, came to Sir Robert Maxwell of Calderwood, as younger son of the family of Nether Pollock, in right of Elizabeth his wife, second daughter and co-heiress of Sir Robert Denniestoun of that ilk. It continued in the possession of the Max-

Clarke del. G. Clarke sculp.

NEWARK CASTLE, SEAT OF LORD CASSILIS.

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well family for several generations, till sold by Sir George Maxwell, *alias* Napier of Kilmaken, to Mr William Cockrane of Kilmaronock, about the beginning of the late century. Antiquities.

In the parish of Kilmalcom are still preserved four cups, which were used by John Knox in administering the sacrament of the Lord's Supper after the manner of the reformed Calvinists. The cups appear to have been originally used as candlesticks; and it was perhaps only from the necessity of the times that they were converted to this pious purpose; the concave bottom is reversed, and the centre, from which the socket seems to have been screwed out, forms the foot. They are of the finest silver; and whether from the association of ideas, or their actual fashion, their appearance is undoubtedly very venerable. They are respected by the people, both for their antiquity and for the sacred use to which they have been applied for two centuries and a half. Communion-cups used by Knox.

It is worthy of notice, that here, as well as in other places in Scotland, a variety of objects bear the name of the favourite ancient hero Wallace. Thus in their descent from the hills in the neighbourhood of Greenock, some rivulets form beautiful cascades, appearing from the shore like wreaths of snow. The chief of them, behind which, from the scooping of the rock, it is very possible to walk, bears the name of this favourite chief. In every quarter steep precipices, high falls of water, high rocks, Roman stations and encampments, and whatever objects seem most remarkable, are designated by a name which is dear to every romantic, youthful, and patriotic mind. This occurs in a particular manner along the banks of the Clyde. This will not appear wonderful, when it is considered that Wallace was a native of this district; having been the younger son of Wallace of Elderslie, in the Wallace, history of.

Wallace. neighbourhood of Paisley. He came forward at a most interesting period, when the disputed succession to the Scottish crown had been submitted to the decision of the king of England, Edward the First. In executing his office of an umpire, the English monarch had contrived to obtain a complete ascendency over the nobles, and over the competitors for the crown. Baliol had been preferred, and in return had acknowledged the dependence of Scotland upon the English crown. He at last, under the mortification of repeated insults, resigned the crown of Scotland into the possession of Edward, on the 2d of July 1296. All Scotland was overrun by a royal English army, and submitted to the conqueror; but it appears that the English monarch had entrusted the government of Scotland to improper persons. Warren Earl of Surry, who had been appointed governor, took up his abode in England, on pretence of recovering his health. Cressingham, the treasurer, was a voluptuous, proud, and selfish ecclesiastic; while Ormesby, the justiciary, was hated for his severity. Under these officers the administration of Edward became more and more feeble; bands of robbers infested the highways; and the English government was universally despised. At this critical moment arose Sir William Wallace, the hero so much celebrated in Scottish fables, and by which indeed his real exploits are so much obscured, that it is difficult to give an authentic relation of them. Wallace himself was endowed with great strength and courage, and an active and patriotic spirit; and by his affability, eloquence, and wisdom, he maintained an authority over the rude and undisciplined multitude who flocked to his standard. In May 1297 he began to infest the English quarters; and being successful in his predatory incursions, his party became more numerous, and he was joined by Sir William Douglas. With their united forces these two

allies attempted to surprise Ormesby, the justiciary, while he held his courts at Scoon; but he saved himself by a precipitate flight. After this the Scots roved over the whole country, assaulted castles, and massacred the English. Their party was joined by many persons of rank; among whom were Robert Wisheart bishop of Glasgow, the Steward of Scotland, and his brother Sir Alexander de Lindsay, Sir Richard Lunden, and Sir Andrew Moray of Bothwell. In the mean while Warren, the governor appointed by Edward, exerted himself in quelling an insurrection which he had neglected to prevent. He hastened Sir Henry Percy and Sir Robert Clifford with a chosen and numerous body against the Scots. The English found them strongly posted near Irvine, formidable in numbers, but through dissension fatally enfeebled. All the leaders were independent, all untractable. They would neither fight, retire, nor treat, by common consent. Sir Richard Lunden, a baron of approved courage, had hitherto refused fealty to Edward. He went over to the English with his followers, and boldly justified his defection, saying, "I will remain no longer in a party that is at variance with itself." Some of the leaders of this discordant army consented to treat with the English. Bruce, the Steward, and his brother Alexander de Lindsay, and Sir William Douglas, acknowledged their offences, and for themselves and their adherents made submission to Edward. The bishop of Glasgow seems to have been the negociator of this treaty (9th July 1297). But Wallace scorned submission. Leaving the opulent and powerful barons to treat with their conquerors, he collected together the faithful companions of his fortunes, and retired indignantly towards the north. The only baron that adhered to him was Sir Andrew Moray of Bothwell. The barons who made the capitulation at Irvine had treated

Wallace.

Wallace. not only for themselves but for their party. Wallace and his associates would not accede to the capitulation. Under the conduct of Wallace and Sir Andrew Moray the Scottish army increased in numbers and force. Whilst Wallace besieged the castle of Dundee, he received intelligence that the English drew near to Stirling. Wallace charged the citizens of Dundee, under pain of death, to continue the blockade of the castle. He hastened with all his troops to guard the important passage of the Forth, and encamped behind a rising ground in the neighbourhood of the abbey of Cambuskenneth.

Battle at Stirling. Brian Fitz-Allan had been appointed governor of Scotland by the English king. Warren remained with the army, waiting the arrival of his successor. He therefore studied to avoid a general action. He imagined that Wallace might be induced, by fair conditions, to lay down his arms, and dispatched two friars to the Scottish camp, proffering terms. "Return," said Wallace, "and tell your masters that we came not here to treat, but to assert our right, and to set Scotland free. Let them advance, they will find us prepared." "He defies us," cried the English, and impatiently demanded to be led on. Sir Richard Lunden remonstrated against the extravagance of making a numerous army defile by a long narrow wooden bridge in presence of the enemy; telling them, that the Scots would attack them before they could form on the plain to the north of the bridge, and thus overthrow their disunited forces. He offered to show them a ford, and with five hundred horse and a select detachment of infantry, to come round upon the rear of the enemy, and by this diversion facilitate the operations of the main body. His judicious proposal was rejected, under pretence that the army would be thereby divided, but probably because the English were not assured of his fidelity. Warren himself

still inclined to avoid a general engagement; but Cressingham passionately exclaimed, "Why do we thus protract the war, and waste the king's treasures? Let us fight, as is our bounden duty." To the ignorant impetuosity of this ecclesiastic Warren submitted his own judgment. The English army began to pass over. Cressingham led the van. Wallace rushed down and broke them in a moment. The wretched Cressingham fell. Many thousands were slain on the field, or drowned in their flight. The loss of the Scots would have been inconsiderable if Sir Andrew Moray of Bothwell, the faithful companion of Wallace, had not received a mortal wound (11th September 1297). A panic seized the English who had been spectators of the route; they burnt the bridge, abandoned all their baggage, and precipitately fled to Berwick. Thus was Scotland once more free. The surrender of the castle of Dundee, and of the other strengths of Scotland, was the immediate consequence of the victory at Stirling. The Scots took possession of the town of Berwick, which the English had evacuated. A great famine arose in Scotland, the consequence of bad seasons, and of the disorders of war. With the view of procuring sustenance to his numerous followers, Wallace marched his whole army into the north of England. He took as his partner in command the young Sir Andrew Moray, whose father had fallen at Stirling. The English historians pathetically describe the terrors and misery of the inhabitants of Cumberland and Northumberland at this season. The Scottish inroads were generally momentary and transient; but now a mighty army fixed its residence in the north of England. That wide tract of country, from Cockermouth and Carlisle to the gates of Newcastle, was wasted with all the fury of revenge, licence, and rapacity. Wallace attempted to repress these outrages, but in vain. "Abide

Wallace.

Invades England.

Wallace. with me," said he to the canons of Hexceldsham; "there alone can you be secure; for my people are evil doers, and I may not punish them." This grievous visitation endured for upwards of three weeks. Wallace then drew off his army.

Guardian of the kingdom. Wallace now assumed the title of *Guardian of Scotland in name of King John, and by the consent of the Scottish nation.* That he deserved the office is certain. *How* he obtained it must remain for ever problematical. Under that title he conferred the constabulary of Dundee on "Alexander named *Skirmischur*, and his heirs, for his faithful aid in bearing the royal banner of Scotland; which service he actually performs." This grant is said to have been made "with the consent and approbation of the Scottish nobility" (29th March 1298). But thereafter the great barons of Scotland began to entertain the utmost jealousy of Wallace. His elevation wounded their pride; his great services reproached their inactivity in the public cause. Pride and envy might affect to consider his hereditary grants as an alarming exercise of sovereign power. Thus did the spirit of distrust inflame the passions and perplex the councils of the nation, at that important moment, when the being of Scotland depended on its unanimity. In the meanwhile Edward prepared to restore his interest in Scotland by a powerful army. A party of English landed in the north of Fife under the Earl of Pembroke. Wallace attacked and routed them in the forest of Black Ironside; but the royal army advanced by the eastern borders. In the neighbourhood of Falkirk the hostile armies met. Wallace was supported by John Cummin of Badenoch the younger, Sir John Stewart of Benkill, brother to the steward, Sir John Graham of Abercorn, and M'Duff, grand-uncle of the young earl of Fife. The Scottish historians represent their countrymen as en-

gaged in fatal dissension on the day of battle. The English historians represent them as fighting with great courage and steadiness. The Scots were completely defeated. M'Duff and Sir John Graham fell. Stewart was also killed. In the meanwhile, by the jealousy of the nobles, Wallace appears to have been reduced to the condition of a private man in that nation which he had once delivered. Edward again invaded Scotland in 1298; but the Scots, taught by experience, avoided an offensive war. The war still continued; and in 1303, Edward, with a victorious army, recovered the country the length of Caithness. The whole kingdom submitted: but amid this wreck of the national liberties Wallace despaired not. He had lived a *free man*; a *free man* he resolved to die. Simon Fraser, who had too often complied with the times, now caught the same heroic sentiments. But their endeavours to rouse their countrymen were in vain. The season of resistance was past. Wallace perceived that there remained no more hope, and sought out a place of concealment, where, eluding the vengeance of Edward, he might silently lament over his fallen country. Nothing now remained of Scotland unconquered excepting the castle of Stirling, which was at length compelled to surrender. But Wallace still lived; and while he existed, though without forces, and without an ostensible place of residence, his countrymen were not absolutely without hope, nor Edward without fear. With an anxiety which marks little vigour of spirit, he eagerly sought to discover the retreat of this single Scotsman, who had never professed submission to his authority; and who therefore, in all the risings of that people, could alone be considered as acting honestly, and without breach of faith. Ralph de Haliburton, a prisoner, offered his assistance for discovering Wallace. Edward allowed him a temporary liberty

Wallace.

Wallace. "to try what he would do" in that dishonourable office. What Haliburton did is unknown. Certain it is that Wallace was discovered. The popular tradition is, that his *friend* Sir John Monteith betrayed him to the Eng-
His death. lish. Wallace was arraigned at Westminster as a traitor to Edward, and as having burnt villages, stormed castles, and slaughtered many subjects of England. "I never was a traitor," said Wallace. To the rest of his indictment he pleaded *guilty*. Sentence of death was pronounced against him. He was immediately executed, with that studied rigour in the circumstances of the punishment, which, seeking to make impressions of terror, excite pity. His head was placed on a pinnacle at London; his mangled limbs were distributed over the land (13th August 1305).

General remarks on his history. Thus perished Wallace, whom Edward could never subdue. In his last moments he asserted that independence which a whole nation had renounced. It is singular that Edward should have pardoned and even trusted the persons who had often made and as often violated their oaths of obedience; while the man who never acknowledged his sovereignty fell the single victim of his resentment. We have here only noticed the ostensible parts of Wallace's history, the truth of which is admitted by the least credulous of modern historians; but it is evident that much ought to be added to complete the detail of his life. Before the son of a private gentleman, without power and without vassals, could contrive, not only to make head against an English invasion, but to number among his followers the proudest and the bravest hereditary barons of the kingdom, he must have performed unexampled prodigies of personal valour, as well as have displayed unprecedented prudence and magnanimity. Accordingly, the rude historians of his own times represent

him as possessed of irresistible bodily strength, and as endowed with the virtues of piety, generosity, and patriotism, in the most eminent degree. To this last virtue, indeed, his claim is undeniable; because, without claiming to himself any permanent prize but that of the independence of his country, he adhered to the pursuit of that object, whether at the head of armies, or concealing him self as a fugitive; and the ascendency of his character, and the confidence reposed in him by his countrymen, rendered him constantly formidable. His historians and tradition have filled up the active period of his life with endless exploits and enterprises, many of which give interest to his fortunes. Storming fortified places, ambuscades, and attacks of every sort upon the English parties and garrisons, are represented as his daily employment. And some great battles are described as having been fought by him, which historians now pass over, because not to be traced from their political effects, or because not mentioned in English records. Though the particulars of the adventures of this hero cannot now be correctly discovered, yet from the vast reputation gained by a private man, whose name is impressed upon so many natural objects and striking scenes, and whose memory, after the lapse of six centuries, has not lost its influence upon the popular feelings, it is obvious that his life must have been filled up with an endless train of romantic and perilous exploits, capable of striking the imagination of a warlike people. Wallace.

In this county there is only one royal borough, that of Renfrew, which is also the head-town of the county, though far inferior in magnitude to Paisley. Renfrew was made a royal borough by Robert Bruce, who granted it a charter for that purpose. Along with Glasgow, Dumbarton, and Rutherglen, it elects a member to serve in parliament. During the century before last, the town of Renfrew.

Renfrew. Renfrew stood immediately upon the banks of the river Clyde, and vessels of considerable burden were built close to the town; but the river afterwards having deserted its ancient course, Renfrew became an inland town: but a channel has been made on the old bed of the river to preserve a communication by water with the Clyde. The town itself is about half a mile in length, having a principal street, with some small lanes; but the principal street is irregularly built, and in some places very narrow. It is governed by a provost, two bailies, and sixteen counsellors. The corporation has a revenue of nearly L. 400 *per annum*, arising from the rents of lands, customs, a salmon-fishing on the Clyde, and the profits of a public ferry over the river. This ferry is perhaps the object which is most worthy of notice here. There is a ferry-house on each side of the river, the property of the town, and a ferry-boat constructed in the most convenient manner. Any carriage, with a pair of horses, can be easily put into the boat without unharnessing the horses, and ferried over and delivered by one man in five minutes. A rope is fixed on each side of the river, and runs upon rollers fixed at each end of the boat; and the boatman, by pulling the rope, gives motion to the boat. It is of great utility in conveying burnt lime-stones, called *lime-shells*, from this county to Dumbartonshire. Such are the pernicious effects of borough-politics, in withdrawing men from industrious habits and pursuits, that this town, though advantageously situated in the midst of a most active commercial district, has almost no trade or manufactures. Here, as in the remote villages of Ayrshire, or of the upper part of Lanarkshire, a considerable number of weavers are employed, but not by resident manufacturers. These persons conduct their employments in the more industrious and enterprising towns of Glasgow

and Paisley. Some thread, however, is manufactured, together with soap and candles, but all upon a small scale. Villages.

The next town of which we shall take notice is Greenock. After the river Clyde has turned from a north-west to a westerly direction, and swells out into a broad estuary or frith, the southern coast is indented by several convenient bays. The chief of these is the united bay of Greenock and Crawford's Dike, which stretches along the frith about four miles and a half. It was formerly called the *bay of St Lawrence*, from a chapel near it dedicated to that saint. Greenock stands upon the shore of this bay, on a piece of level territory. The adjoining land is hilly, and from the distance of two miles the town is overlooked by a chain of hills that is nearly 800 feet above the level of the sea. In the beginning of the late century Greenock consisted merely of a row of thatched houses, without any harbour; but with its suburbs, and the village of Crawford's Dike adjoining to it on the east, it is a town of about a mile in length, of considerable breadth, and much of it is well built. What is called the *town* of Greenock is a borough of barony, erected in 1757. It is governed by a council of nine feuars, two of whom are bailies. The village of Crawford's Dike, or Cart's Dike, which forms a part of the same town, was erected into a borough of barony by Charles the First in 1633. It has a good harbour and quay, older than those of Greenock. In Greenock there are two parish-churches and a chapel of ease; and a chapel in which the service is performed in the Gaelic tongue, for the benefit of the great numbers of Highlanders who reside here: besides these there are several dissenting meetings. Greenock.

In the year 1700 the inhabitants of Greenock presented a petition to the Scots parliament, praying for the esta- History of Greenock.

Villages. blishment of a fund wherewith to build a harbour. The petition was refused, most probably in consequence of the jealousy of the royal boroughs, and perhaps of the magistrates of Glasgow in particular, who did not wish to see a rival to their infant establishment of Port Glasgow. But the inhabitants of Greenock, instead of relinquishing the project which they had formed, of converting their town into a seat of commerce, only altered the plan of accomplishing that object. They entered into a contract with their superior, Sir John Shaw, under whom they held their small properties in feu, and agreed to assess themselves in the sum of 1s. 4d. Sterling on each sack of malt brewed into ale within the limits of the town. Parliament had refused to sanction this tax; but by the unanimous agreement of the inhabitants it was thus imposed, in the form of a private contract, binding upon themselves and their successors, and upon all strangers to whom the superior or lord of the barony might grant new possessions or feus. At that time ale was the universal beverage of the labouring people in Scotland, as French wines were of the better sort; and neither of these classes of persons had learned the pernicious practice of using distilled liquors. Hence the tax already mentioned was accounted adequate to the object in view. In consequence of it the harbour was begun in 1707. More than ten acres were inclosed within two circular quays, by the intervention of a mid quay or tongue, the whole consisting of about 2000 feet of stone in extent. The expence amounted to upwards of 100,000 merks of 13⅓d. each. The community or inhabitants of the town were so alarmed by what appeared to them an enormous debt, that they agreed to transfer the harbour, with the tax already mentioned, into the hands of their superior, upon his becoming security for the payment of the debt, or rather upon his advancing the money. The trade, how-

ever, increased so rapidly, that by the year 1740 the whole debt was paid off; and there remained a considerable surplus to form a fund to the community. Since that time the harbour has been enlarged, and dry docks built. In former times, all the large vessels belonging to Clyde were built in America; but since the United States established their independence, ship-building has been here carried on to a vast extent, for the purpose of supplying the West Indian and every other branch of navigation. Villages.

The road or outer harbour of Greenock is attended with some peculiarities. By a sand-bank of considerable breadth, stretching from Dumbarton to a little below the town, the road is made narrow, and the navigation to Port Glasgow rendered sometimes tedious and difficult. At low ebbs (except two slanting gaps through it) it is dry, and abounds with shell-fish of various kinds. In high gales off north-east it is of no small service to the road and harbour of Greenock. At the bottom or *tail* (as it is usually called) of this bank, and which, as a *loosing* place, experienced mariners prefer to any other harbour in the frith, there is at all times sufficient depth of water, abundance of room, and good anchoring ground, for hundreds of ships of any burden hitherto built. Directly opposite to the tail of the bank, where the channel is narrowest, tradition says there was anciently a fort or castle. On the spot a battery was raised during the war which preceded that with America, on occasion of an alarm given to the west of Scotland by a small French squadron under M. Thurot. The battery was afterwards restored and enlarged; but some people say that all this trouble was unnecessary, because the same wind can scarcely bring a vessel into this port and carry it out again; and hence no marauding expedition can be directed against it, because the vessels making the attack could have no Road.

Villages. expectation of escaping. In the early part of the late century, down to the American war, the trade of Greenock was chiefly carried on by the merchants of Glasgow, who were owners of almost all the vessels that belonged to this port; but large capitals having been gradually acquired by the inhabitants of Greenock, they are now the principal ship-owners. Indeed this is now a place of great opulence, and of vast commercial enterprise. The goods imported consist chiefly of cotton, sugar, rum, grain, wine, and other articles, for home consumption, besides naval stores, potash, oil, timber, fruits, &c. The goods exported consist of the whole produce of the great manufacturing country upon Clyde. Fisheries of herring and the whale fishery have long been carried on here to a considerable extent; but there are few manufactures here carried on to any extent, excepting of cordage and sail-cloth, sugar-baking, and some few others. The towns and villages on the lower part of the Clyde may be considered as one great commercial community, though different departments of business are conducted at each. Greenock is the principal organ of transport or conveyance, by which the cotton, the sugars, the rum, and all the other productions of America, are introduced into this country; and by which, in return, the manufactured goods, and the coal and other minerals, are distributed to other countries. As it is divided from the West Highlands only by a narrow frith; and as, during half a century, from the change in the state of the country, and the conversion of many small farms into one of large extent, the inhabitants of that district have been constantly emigrating in great numbers, Greenock has been the resort of multitudes of them; a circumstance which has been rendered the more likely to occur, because this port is the best outlet to a more remote emigration. In the streets

of Greenock a stranger is somewhat apt to be surprised by the frequency with which he hears the Gaelic tongue spoken. Great numbers of the most respected and prosperous citizens are the lineal progeny, and many of them still understand the language, of the ancient Celts. Villages.

The principal street of Greenock is in general well built, and contains many houses, erected in a handsome and elegant manner. As every thing here is in a state of rapid improvement, the newest buildings are the best; that is, those at the two extremities. In the middle of its course, which is from east to west, it spreads out into a square, which forms the centre or public place of the town. The street running northward is the principal avenue to the harbour. The principal street has in its whole course smaller streets parallel to it; the whole of which are intersected at right angles by others. The new streets towards the west are spacious, and many of the buildings elegant. It is here that the wealthiest part of the community appear to reside. The town-house stands in the principal street, to the westward of the square already mentioned. It is appropriated by the magistrates and council for the discussion of public business; and is also, for the accommodation of the merchants, used as a news-room and change. In adjoining apartments are the offices for the town-clerk, a coffee-room, guard-house, and prison. Streets, buildings, &c.

The finest public building here, however, is the New Inn or Tontine, eastward from the square or cross that forms the centre of the town. To carry it into execution a subscription was set on foot on the principle of a tontine. In two days it was filled up to the extent of L. 10,000; a circumstance which sufficiently demonstrates the opulence of the inhabitants of this place. Its architecture is very elegant and simple.

Villages. We remark with satisfaction, that in almost every considerable town in Scotland, libraries begin to be established and supported by the subscription of the inhabitants, who manage them by means of a committee and librarian. There is in Greenock a very valuable library thus supported; and for the use of which, besides the books of established character, all new works that are accounted likely to prove valuable are purchased. Both here, and in every other place where such institutions have been established, their effects have been found extremely beneficial. Young men, in the hours of relaxation from business, are no longer under the necessity of seeking occupation in idle parties, or in frivolous or perhaps criminal amusements; a general taste for reading the best authors diffuses itself; and persons justly entitled to the denomination of men of letters are rapidly springing up, who add the activity and vigour of commercial enterprise to the intelligence and liberality of accomplished scholars.

New Port Glasgow. Further up the frith of Clyde, at the distance of about three miles, is the town of Port Glasgow or New Port Glasgow. A small village stood in the vicinity in the century before last; and adjoining to it, the magistrates and council of Glasgow feued eleven acres of land for the accommodation of their shipping, and obtained it to be erected into a separate parish in 1695. It has a double name, that of New Port Glasgow and Newark, denominated after the new and the old village. One part of the town stands upon the piece of ground which was obtained in feu by the magistrates of Glasgow, and to which, from its destination, they gave an appropriate name; whereas the name of Newark belongs to the remainder of the town or the original village, which has now been considerably enlarged. These two parts are adjoining, and form one town; the proprietors of houses in the for-

mer being vassals of the city of Glasgow, and those in the latter vassals of the proprietor of the estate of Finlayston Maxwell. Before the year 1775, the city of Glasgow and the proprietor of the lands of Finlayston Maxwell exercised the same jurisdiction over their respective parts of the town that a baron exercises over his vassals; but at this period the feuars of Port Glasgow and Newark, with the concurrence of their immediate superiors, applied to parliament, and got themselves erected into a borough of barony, with a council of thirteen persons, called *trustees*, appointed to regulate and manage the public police of the place. These trustees are feuars possessed of at least L. 10 Sterling a-year of heritable property within the town. They were elected for the first time by a general poll of all the feuars, and ever after are elected by themselves; four of them being disqualified yearly by a plurality of votes; and four others, who had not been in the council for three years before, being chosen to fill up the vacant places. Of these trustees two are bailies. The one, called the oldest bailie, is chosen annually by the town-council of Glasgow; and the other, called the youngest bailie, is chosen annually by the trustees themselves: "which two bailies (says the act of parliament), or either of them, are authorised, empowered, and required, to administer justice, and to exercise all the power and authority by the laws of Scotland committed to the bailies of a burgh of barony." Villages.

The town stands on a flat and narrow piece of coast, which is nearly a dead level, and little higher than the high water-mark. Immediately behind, the hills rise to a considerable height. The river Clyde here is about two miles broad. The navigable part of it, called the channel, lies along the New Port Glasgow shore, and is about 200 yards broad. It is so deep at high water that the

Villages. largest vessel can easily be moored in the harbour without discharging any part of her cargo, which cannot be done at Greenock. From the hill behind, which overlooks the town, and even from the quays, a magnificent prospect is seen. The river Clyde, whose outlet to the sea, in consequence of its turning southward, is not seen, has all the appearance of a fresh-water lake covered with vessels. On the opposite coast of Dumbarton and Argyleshire abundance of plantations and gentlemens seats meet the eye; and the view is terminated by the western range of the Grampians raising their ragged and craggy rocks to the clouds. During severe frosts in winter, immense multitudes of sea-fowls resort hither. Thousands, or rather millions, of them are to be seen at once; but when a thaw comes they instantly disappear.

Notwithstanding the patronage of the city of Glasgow, or rather perhaps in consequence of that sort of illiberal administration which universally occurs when one community governs another, New Port Glasgow has in no degree been able to keep pace with Greenock, and is not more than a fifth or a sixth of it in magnitude, as will appear from consulting the population table. The kind of trade carried on here is similar to that of Greenock. During the first part of the late century this town seems to have been almost entirely dependent upon Glasgow, and to have followed its fortunes. Accordingly, when the American war deeply injured the foreign commerce of that city, and when its traders directed their views towards other sources of riches, and particularly towards manufactures, this place, which was little more than the port or harbour of Glasgow, suffered a severe stagnation of business; but its own inhabitants began gradually to engage in commerce; and it has now assumed a consider-

able degree of importance and vigour, and is in a more independent train of prosperity than formerly. Villages.

But by far the most important town in this county, and one of the most considerable manufacturing towns in Scotland, is Paisley. It stands upon the banks of the river Cart, at the distance of six miles and a half westward from Glasgow. The old town is on the western side of the Cart, on elevated ground, which has a view upwards to Glasgow. The new town is on the eastern side of the Cart, and is regularly laid out; but the streets are not placed at right angles to each other. Paisley has three bridges, at convenient distances, over the Cart, for the purpose of connecting with each other the different parts of the town and suburbs, that is, the new and old town. Its streets are well paved, it occupies a large extent of ground, and contains many excellent buildings, the residence of its opulent manufacturers. It was erected into a borough of barony by James the Fourth in 1488. This privilege was obtained by George Shaw, then abbot of the monastery; and Paisley was then probably nothing more than a petty village, dependent upon that ecclesiastical establishment. Even at the beginning of the late century it is described as consisting only of one principal street of about one-half mile in length, with some lanes; but now the town and suburbs, when traversed by a stranger, seem, after Edinburgh and Glasgow, to be equal or superior to the most populous town in Scotland. The borough is governed by three magistrates and seventeen counsellors. Not being a royal borough, it is not represented in parliament. The town is divided into three parishes, and also contains some dissenting congregations. An hospital was erected here in 1752, for the support of aged persons and children of the poor connected with the town. It has a large garden belonging to it, and is under Paisley.

Villages.

the management of fifteen directors, chosen annually; three from the town-council, one from each kirk-session, and the rest chosen by the council from among the inhabitants; but, in general, the poor are supported by pensions. The greatest inconvenience attending this, as well as some other towns and villages on the lower part of the Clyde, is the want of an abundant supply of good water. Could it have been foreseen that a great town was to arise here, the evil might perhaps have easily been prevented; but now that every spring and well is occupied by bleachfields or otherwise, and has become valuable property, an abundant supply can scarcely be hoped for.

Manufactures of Paisley.

The manufactures of Paisley, the chief part of which have always been connected with the loom, form the principal object of curiosity in the history of this town. It would appear, that soon after the union, fabrics of different sorts were produced in Paisley at a cheap rate. The inhabitants seem to have followed up very rapidly every new manufacture introduced at Glasgow. The persons who chiefly settled here as manufacturers or dealers consisted, in general, of a set of men, who at one time were extremely numerous and useful, both in Scotland and England. These were pedlars, or, as they are called in Scotland, *packmen*, who travelled about the country to supply the inhabitants with such commodities as could not be produced by domestic manufacture. The object of every packman's ambition ultimately was to become a settled shopkeeper or merchant in some commercial town; and many of them, before the close of their lives, have appeared in the first rank of Scottish merchants in Glasgow and every other city. It frequently happened, however, from their universal eagerness to fix themselves in a settled residence, that they made the attempt with too small a capital to give them a prospect of success in the greater

towns; and hence they were under the necessity of set- Villages.
tling in secondary situations. Paisley offered itself as an advantageous position, second only to Glasgow; and men experienced in the kinds of goods for which a demand existed throughout the country were well qualified for directing the operations of manufacturers in a town.

Men engaging in the pursuit of riches by means of commerce or manufactures must necessarily possess considerable activity to watch every means of success; and they are frequently of a sanguine and enterprising character. Hence it often happens, that in a particular town some one sort of manufacture greatly predominates. As soon as one or two individuals are observed to attain to opulence by means of it, the whole of their neighbours, having no other employment or business in life, excepting that of pursuing riches by whatever lawful means they may be obtained, instantly throw themselves into the career in which they perceive that others have prospered. Accordingly, in looking back to the history of this or any other manufacturing town, it will usually be found, that at particular periods some one or two branches of business have prevailed over every other. In these all persons are occupied; and in proportion to the fortune of these, the whole society is prosperous or depressed. At first Paisley was celebrated for coarse chequered linen cloth, afterwards chequered linen handkerchiefs; some of them fine, and beautifully variegated by the manner in which the different colours were disposed according to the taste and invention of the manufacturers. These were succeeded by fabrics of a lighter and more fanciful kind, consisting not only of plain lawns, but likewise those that were striped or chequered with cotton, and others that were ornamented with a great variety of figures; some of which last articles still continue to be manufactured here. An-

Villages. other manufacture was also of great importance during a considerable period in Paisley, and the person who introduced it had previously been brought into notice by the superstition of the times. One of the last trials in Scotland for witchcraft originated in this neighbourhood in 1697, in the parish of Erskine. The person supposed to have been bewitched or tormented by the miserable wretches, believed to be in compact with the devil, was Christian Shaw, daughter of John Shaw of Bargarren.

Thread manufacture. This young lady appears to have survived the machinations of Satan and his accomplices; and having afterwards acquired a remarkable dexterity in spinning fine yarn, she conceived the idea of manufacturing it into thread. Her first attempts in this way were necessarily on a small scale. She executed almost every part of the process with her own hands, and bleached her materials on a large slate placed in one of the windows of the house. She succeeded, however, so well in these essays, as to have sufficient encouragement to go on, and to take the assistance of her younger sisters and neighbours. The then Lady Blantyre carried a parcel of her thread to Bath, and disposed of it advantageously to some manufacturers of lace; and this was probably the first thread made in Scotland that had crossed the Tweed. About this time a person who was connected with the family happening to be in Holland, found means to learn the secrets of the thread manufacture, which was then carried on to great extent in that country, particularly the art of sorting and numbering the threads of different sizes, and packing them up for sale, and the construction and management of the twisting and twining machines. This knowledge he communicated on his return to his friends in Bargarren; and by means of it they were enabled to conduct their manufacture with more regularity and to a greater extent. The

young women in the neighbourhood were taught to spin fine yarn; twining mills were erected; correspondences were established; and a profitable business was carried on. Bargarren thread became extensively known, and being ascertained by a stamp, bore a good price. From the instructions of the family of Bargarren, a few families in the neighbourhood engaged in the same business, and continued in it for a number of years. It was not to be expected, however, that a manufacture of that kind could be confined to so small a district, or would be allowed to remain in so few hands, for a great length of time. The secrets of the business were gradually divulged by apprentices and assistants. A Mr Pollock in Paisley established a manufacture of the same sort, which was speedily followed by others. The Paisley thread was of that sort known to merchants by the name of *ounce-thread*, as distinguished from the different kinds which have been prepared chiefly at Aberdeen and Dundee. Villages.

About the year 1760 Mr M'Kerral of Hillhouse, in Airshire, introduced the manufacture of silk gauze into Paisley, in imitation of that of Spittalfields in London. After various counteractions, to which all new inventions or trials are exposed, he completely established the manufacture. Originally the patterns and designs of all fancy works, modes, and fashions, were composed at Paris, and issued out with an absolute authority all over Europe. But the Paisley manufacturers established draughtsmen of their own, by whom their designs were composed, and the patterns, when executed, were sent to London and Paris for approbation. By these means the inventive principle of modes and fashions, at least in respect of gauze, was transferred from Paris to Paisley. The consequence was, that nice and curious fabrics were devised, and such a vast variety of elegant and richly orna- Silk gauze.

Villages. mented gauze was issued from this place, as outdid every thing of the kind that had formerly appeared. Spittalfields was obliged to relinquish the manufacture; companies came down from London to carry it on at Paisley, where it prospered and increased, it is believed, beyond any manufacture which any town in Scotland can boast of. Indeed it not only became the great distinguishing manufacture of this town, but it filled the country round to the distance of twenty miles; and the gentlemen engaged in it had not only warehouses in London and Dublin, but they had correspondents upon the continent, and shops for vending their commodities even in Paris itself.

Cotton. After the invention of Arkwright's machinery for spinning cotton had rendered fabrics prepared from that material at once cheap and elegant, the demand for silks naturally declined, and almost entirely passed away; but Paisley was not tardy in adopting the new manufacture, or in bringing it to its utmost perfection. The whole neighbouring waters were speedily occupied, as already mentioned, with spinning mills and bleachfields; and every village here, and in Airshire, has been filled with persons employed in weaving cotton goods. Thus this town has deservedly risen to distinction and opulence by the enterprising ingenuity and good conduct of its inhabitants, which have proved the source of great wealth to themselves, and to the whole of that part of the British empire which is situated in their vicinity.

Besides the towns already mentioned, some thriving and populous villages are to be found in the county, such as Pollockshaws, Bridge of Johnston, and Lochwinnoch; but they contain nothing that requires particular notice. They are chiefly occupied by weavers, who derive employment from Glasgow and Paisley.

The following Table contains a statement of the population of the county.

Parishes.	Population in 1755.	Population in 1790-8.	Population in 1801. Persons. Males.	Females.	Occupations. Persons employed in agriculture.	Persons employed in trades, &c.	All other Persons.	Total of Persons
Cathcart	499	697	522	537	131	127	801	1059
Eaglesham...	1103	1000	588	588	300	512	364	1176
Eastwood ...	1142	2642	1652	1723	168	1374	1833	3375
Erskine	829	808	419	428	231	59	557	847
Greenock ...	3858	15000	8196	9262	70	4189	13199	17458
Houston & Kilallan..	947	1034	884	1007	294	588	1009	1891
Inchinnan...	397	306	239	223	78	28	356	462
Innerkip	1590	1280	635	732	77	101	1189	1367
Kilbarchan ..	1485	2506	1437	2314	215	909	2627	3751
Kilmalcolm..	1495	951	544	586	218	66	846	1130
Lochwinnoch	1530	2613	1371	1584	190	205	2560	2955
Mearns	886	1430	756	958	403	320	991	1714
Nielston.....	1299	2330	1702	2094	536	1247	2013	3796
Paisley, Abbey parish	2509	10792	6592	7561	452	4165	9536	14153
Do. Town parish ...	4290	13800	7821	9205	318	7321	9387	17026
Port Glasgow	1695	4036	1748	2117	15	243	3607	3865
Renfrew	1091	1628	962	1069	198	292	1541	2031
Total	26645	62853	36068	41988	3894	21746	52416	78056

The most populous part of Renfrewshire lies in a low and level tract, or is in the immediate neighbourhood of the lower part of the Clyde, and near to the waters of the western ocean. Hence the air is moist, and it is exposed to considerable rains. It does not appear, however, to be by any means unhealthy. At the same time, partly in consequence of its low situation, and partly from the crowded population, consisting of persons of low rank, who under occasional stagnations of trade are apt to be brought into straitened circumstances, when any epidemical distemper introduces itself, it has been thought to con-

Language, &c.

tinue more obstinately than in the freer atmosphere of the more elevated and mountainous districts of Scotland.

The dialect spoken in this part of the country is the common low country Scots used by Burns and Ramsay; but it has a peculiarity in the mode of pronunciation extremely discernible to a Scottish ear. The most striking circumstance attending it seems to be a disposition to shorten the penult, and prolong the last syllable of words, when the structure of them admits that to be done. The vowel in the penult syllable is for the most part expressed with the obscure imperfect sound which the English give to the character *e* when between two consonants; and the lengthened vowel of the last syllable is very often the English sound of *a* in the word *part*. The penult is pronounced with the acute accent or rising inflection of the voice, and the last syllable with the inverted, or falling and rising circumflex. The intervals between the extremes of gravity and acuteness of tone are often considerable.

It is unnecessary to make any remarks upon the character of the people of this county. It is similar to that which prevails over the rest of the west of Scotland; and any peculiarities which exist are the result of the manufacturing and commercial spirit common to it with the whole of the lower part of the adjoining county of Lanark.

LANARKSHIRE.

THE county or shire of Lanark is very generally denominated *Clydesdale*, from the river Clyde, which has its source in the upper confines of the county, traverses it in a winding course of upwards of sixty miles, dividing it longitudinally, and afterwards wafts the trade of Glasgow and Paisley to the Ocean. This county is situated between 55° 22′ and 55° 58′ north latitude, and between 30° 15′ and 4° 19′ west longitude. It is in the centre of the south of Scotland between the Atlantic and German Oceans; and is bounded by the counties of West and Mid Lothians and Peebles on the east, by Dumfriesshire on the south, by the counties of Air and Renfrew on the west, and by those of Dumbarton and Stirling on the north. The greatest length of the shire, from north to south, is about 47 miles; and the greatest breadth, from east to west, about 32 miles. The square contents are perhaps nearly 870 miles, equal to 556,800 English acres, or nearly 445,440 of the ordinary Scottish measure. This district is subdivided into three inferior divisions, called *Wards*, under the particular jurisdiction of a substitute appointed by the sheriff-depute of the county. The Upper Ward, of which the ancient borough of Lanark is the chief town, comprehends the parishes of Carluke, Lanark, Carstairs, Carnwath, Dunsire, Dolphington, Walston, Biggar, Liberton, Lamington, Coulter, Crawford, Crawford-John, Douglas, Wiston and Roberton, Symington, Coving-

Boundaries.

Subdivisions.

Soil. ton, Pettinain, Carmichael, and Lesmahago. The Middle Ward, of which the town of Hamilton is the centre, comprehends the parishes of Hamilton, Blantire, Kilbride, Avondale, Glassford, Stonehouse, Dalserf, Cambusnethan, Shotts, East Monkland, and West Monkland. The Lower Ward, lying immediately around the city of Glasgow, besides the country or barony parish of Glasgow, contains the parishes of Calder, Cambuslang, Rutherglen, Carmunnock, Govan, and a part of Cathcart; the remainder of this last parish being in the county of Renfrew.

Upper Ward. This county is so extensive, and the surface so greatly diversified, that it would be impossible to give any toleable map of the quality of the soils. The Upper Ward, which is nearly two-thirds of the whole county, is mostly mountainous, or at least hilly and moorish, and, from the nature of the soil, and the great elevation of the country, not capable of much agricultural improvement. Between two-thirds and three-fourths of its extent may be comprehended under this description. The wide parishes of Crawford and Crawford-John, the greatest part of Lamington and Coulter, are high and rugged. Three-fourths of Douglas and Lesmahago, on the one side, and of Dunsire on the other, are either moorish heathy land, or covered with beds of peat-earth, yielding but little useful herbage. Considerable tracts in the parishes of Carluke, Carstairs, Lanark, Carnwath, Walston, Dolphington, and Biggar, are of much the same quality. At the same time there are important exceptions to this, as will be afterwards noticed, particularly within two miles of the Clyde.

At the head of the county, where it comes in contact with that of Dumfriesshire, the country is extremely mountainous; and the mountains are of that description, with a narrow foot, and a long steep ascent or acclivity, which we formerly described. These mighty edifices of

nature are crowded so closely together, that their grandeur is lost to the eye of the traveller. When he proceeds along the hollows, only the sides of the nearest mountains are presented to his view; if he climb an eminence, he ees nothing but a confused group of rugged tops, with the naked rock now and then appearing among the herbage. The elevation of this tract is very great; the site of the village of Leadhills being computed to be 2000 feet above the level of the sea; and the top of one of the *Lowthers*, a ridge of hills near that place, has been found to be 1100 feet higher, making the height of this summit 3100 feet. Soil.

In proceeding down the Clyde the prospect opens, the hills stand at greater distances from each other, and the ascents are less abrupt; villages, farms, corn-fields, and plantations of trees, appear among the eminences; and the mixture of hill and dale forms a scene at once simple and sublime. The nature of the soil, however, is not always more fertile as the elevation becomes less. The pastures on the heights of Crawford are superior to those of Douglas or Dunsire. The former are upon hard rock, and many of them pretty dry, covered with a thick mixture of short heath and sweet grasses, sometimes a close verdant carpet with very little heath. The latter are frequently wet and spongy, and their herbage thin and coarse. As the hills decline in height, the rock more seldom appears on the surface; and beds of gravel, of a considerable depth, are sometimes seen.

Tinto, or Tintoc, signifying *the hill of fire*, is the last great mountain to the north, and forms the boundary of the hilly district on that side. The height of this mountain is about 2260 feet above the level of the sea; and the medium height of the arable land around its base from 600 to 700 feet. From Tintoc the face of the country is Tintoc.

Soil. softened down to gentle elevations and depressions; and the Clyde slowly glides, with many windings around the mountain, through a tract of beautiful meadows, for above a dozen miles, till it arrives at the head of the celebrated falls: from thence it rushes from cataract to cataract, foaming among the fragments of rock, for about six miles, and regains its quiet bed and gentle motion in the lower part of the Upper Ward.

The principal part of the arable territory of the upper district is in the parishes around Tintoc, at no great distance from the river. A tract of country is there found, to the south and eastward of the mountain, in the parishes of Wiston, Symington, Coulter, Biggar, Covington, Liberton, and Carstairs, which is of very considerable value. The soil, in particular, around Biggar and westward, in a direct line along the southern side of the mountain, is of the most valuable quality, and incomparably superior to what is found in almost any corner of the Lothians. It appears to be formed upon the surface of whin or basaltic rock, which, from the perpendicular position of its strata, readily absorbs or conveys downwards, into the bowels of the earth, the superabundant moisture of the climate. But an elevation of more than 600 feet above the level of the sea exposes this fine tract of territory to the greatest disadvantages, in consequence of late seasons, and the pernicious frosts formerly described as occurring in Tweeddale. Around Tintoc the soil of the meadows by the river-side, formed by the slime deposited in floods, is of the nature of carse-ground, with a greater or less mixture of sand, in proportion to the quicker or slower motion of the stream by which it has been deposited. These meadows are very fertile, and are still receiving additions from the inundations of the river. But this cause of fertility is also the cause of frequent and considerable da-

mage; the inundations sometimes destroying the crops, shifting the course of the river, carrying away the rich soil, and leaving beds of sand and gravel in its stead. The uplands, as already mentioned, are dry and very fertile, of a light soil, often with an under stratum of gravel, that is, of fragments of rock, to a considerable depth: but some places occur which have hitherto remained uncultivated, and exhibit a sterile aspect; and in others, the surface, by the severity of the climate, has become moorish and spongy. Soil.

From the beginning of the falls, downward, the face of the country is considerably altered for some miles. The basaltic or whin rock begins to terminate, and horizontal strata of free-stone to occur. The river sinks into a deep bed, several hundred feet below the level of the surrounding country; and the soil of the country itself gradually deteriorates, in proportion as it descends towards a milder climate. The greatest part of the arable land in the parishes of Lanark and Lesmahago is dry, light, and friable; and, though much less fertile, somewhat resembling that in the neighbourhood of Tintoc, already described. In the lower part of the Upper Ward the clayey soil takes place; and much of the soil of Carluke parish is either of a clayey nature, or has a dense argillaceous bottom. A great deal of it is damp, cold, and barren; but some of it is of a very good quality; and that verge of the parish which lies along the Clyde is not less fertile in soil than rich in picturesque beauties. Towards the lower part of the Upper Ward, though the soil in general is less fertile, the country becomes more interesting. Handsome seats, surrounded with well-dressed fields, sheltered with clumps and belts of trees, are frequent. Villages, filled with industrious inhabitants, arise on all sides; and in every quarter, beauty and fertility are annually given to some

Soil. new spots. The country descends nearer to the level of the river, and fertile valleys again adorn its banks.

Middle Ward. At the commencement of the Middle Ward the territory has lost much of its elevation, and continues to fall towards the north-west. When seen from a considerable height, it has a level appearance: but in fact it is everywhere diversified by inequalities; scarce a plain of any considerable extent intervening, except the valleys along the sides of the river, from which the surface, as it recedes, rises irregularly to the highest ridge, on each side, near the confines of the county. The height of these ridges, if a few particular summits of no great importance are excepted, is not more than 700 feet above the level of the sea. The site of the town of Hamilton, on the low ground in the centre of the Middle Ward, is computed to be from 100 to 140 feet; the medium height of the cultivated land is probably from 250 to 300 feet above the sea.

The soil of the Middle Ward, though much diversified, is generally of a clayey nature. Towards the river, for twelve miles in length, and perhaps six miles in breadth, a more beautiful country can scarcely be seen. It lies sloping on all sides towards the Clyde. It abounds in orchards and country-seats, with numerous villages and hamlets; and the whole is adorned with beautiful plantations. But remote from the river, the aspect of the country is in general very different, as it ascends towards the high country or ridges on each side. It is supposed that in the Middle Ward there are no less than 40,000 acres of moss. With regard to the rest of the soil, the bottom is a hard clay, which readily splits into thin plates, chiefly in a horizontal direction. It is called by farmers *till*, and by mineralogists *schistus*, *blaze*, or *blae*. It usually appears in those countries where coal and lime are found. It

is chiefly clay, containing sand and mica in different proportions. When exposed a short time to the weather, it falls down into a soft clay, and may in time be reduced to good soil. This decomposition is owing to the action of the atmosphere, sun, and rain, that alters the cementitious or stiff matter in the different earthy particles. The cementitious matter is chiefly sulphureous or aluminous; a substance which, unless it is extracted or altered, renders the earth with which it is mixed extremely unfit for vegetation. Besides this clayey soil, sometimes a little tract of sand or gravelly soil occurs; and when a bed of this open quality is of a tolerable depth, the land is dry; but wherever the clayey under-stratum approaches the surface, which frequently happens, the soil is soft and wet. At some distance from the river there is frequently found, lying upon a clay bed, a thin loose soil, much disposed to heave with the vicissitudes of the weather, and very unfit to furnish either nourishment or a sufficient mechanical support to the plants. The black or grey soil on the high moorish grounds is somewhat similar to this, but generally bears much more grass. The water-formed soils in the valleys by the sides of the river, and some of the other considerable streams, differ greatly from all the above-mentioned, being naturally more fertile, deeper, and generally less apt to be injured by rain, as they lie upon a bed of open gravel. Soil.

With regard to the aspect of the country in the Middle Ward, at a distance from the river, and resting upon such species of soils, it may be remarked, that the highest ridge, on the north side, runs along the eastern extremity of Cambusnethan parish, through the middle of that of Shotts, where this ridge is pretty high and rocky; and thence through East Monkland parish, declining a little as it proceeds westward. In these three parishes, parti- Face of the country.

Soil. cularly in that of Shotts, lie the greatest part of the *mosses* to be found on this side the river. Much of the rest of the soil along the ridge is moorish, coarse, and wet. On the Calder, which divides the parishes of Cambusnethan and Shotts, there is a tract of pretty good soil on both sides. Near the head of the stream it is light, sandy, or gravelly, and pretty dry; farther down it becomes a strong clay. Many fields in East Monkland, though high, are tolerably fertile; some are inclined to sand and some to clay. A considerable part is of a grey moorish soil, and somewhat of a mixed nature. This tract is interspersed with spots of pasture, and marshy meadow sown annually for hay. The opposite or southern side of the Clyde, beginning in the parish of Avondale, is a continuation of the hilly range which divides the parishes of Douglas and Lesmahago from Airshire, and runs from Avondale, through Kilbride, to the county of Renfrew. The wilds here are much more extensive than those on the north side of the Clyde. Through a tract of twelve miles long, and sometimes a considerable breadth, there is scarce any thing but mosses and benty or heathy pasture, very wet and coarse; a mixture here and there is somewhat drier, and may be called green. The arable land of Avondale bears only a small proportion of the whole; but the greater part of the parishes of Kilbride, Stonehouse, and Glassford, are arable. The lowest part of the Upper Ward is extremely beautiful, in consequence of the efforts of cultivation.

Lower Ward. The Under Ward, though a very limited district, is the most important of the whole, on account of its containing the city of Glasgow. A great part of the surface of the soil has been greatly improved and ornamented by the overflowings of a prosperous commerce, which has enabled the citizens to convert a portion of it into sum-

mer retreats. With regard to the remainder, the soil, in general, consists of clay resembling that already mentioned, or of a sand originally very poor. The surface of what is called the Barony Parish of Glasgow is wonderfully diversified, and some of its valleys or low grounds are uncommonly fertile. Soil.

Upon the whole, it may be remarked, that this county, in some degree, contradicts a general rule relative to the fertility of the earth. It is generally understood, that in the same latitude land is always more valuable in proportion to the comparative lowness of the situation; but, in opposition to this rule, the territory along the Clyde above the falls seems to be superior to any in the lower part of the county; not only to these fields nearly on the same level on the ridges of the country, but exceeding, in real intrinsic fertility, the fine low grounds which are 400 or 500 feet less elevated. The meadows or valleys of the former, by the river-side, are cropped and left in grass for a few years alternately, and without receiving any manure continue to yield abundant harvests. The uplands, when properly freed of weeds, are very productive with half the manure which is found necessary in the lower part of the county, and the harvests are generally earlier. One circumstance already alluded to, however, tends greatly to diminish the difference of the comparative value of land in these different districts. The spring, but more especially the autumnal frosts, are more frequent and more intense in the upper country than in the lower. Those calamitous mildews or hoar-frosts, sometimes in the month of August, fall down from the sides of the mountains, condense at the bottom, and sweep slowly along the valleys of the Upper Ward, blasting the harvest wherever they come; while the opener country below perhaps escapes, and the corn ripens slowly to a tolerable General remark.

Waters. harvest. Such frosts are said to be more frequent these last thirty years than formerly, and particularly since 1782. In the narrower valleys their effects are more severely felt; so that, among the thick-clustered hills, near the upper extremity of the county, tillage is almost abandoned.

Clyde. Of the waters of this county, the chief, and that most deserving of notice, is the river from which the district derives its name, and which we have already repeatedly mentioned; but the scenery upon its banks merits more particular notice. After descending from the highest region in the south of Scotland, and collecting a variety of streams from the mountainous district of Crawford and Crawford-John, the Clyde, by the time it arrives at the upper part of the parish of Lamington, has become a very considerable river; thereafter it winds around the roots of Tintoc, in a beautiful and serpentine course, among cultivated banks, for many miles. Its waters are clear, and it rolls over a bed consisting of hard gravel, and sometimes of great stones approaching to the character of rocks. It generally has fords at the distance of every one or two miles, which may be passed on foot; and bridges have been built upon the most important roads. The Clyde is here, however, a dangerous river; it is apt to swell very unexpectedly, in consequence of rain falling among the mountains where it takes it rise. During the heats of summer, the brightness of its waters is continually tempting young persons in the neighbourhood to the amusement of bathing; whilst its stony bottom, the weight of the stream, which often takes sudden turns, and the remarkable inequality of the bottom, frequently hurry them to destruction: no dry season, passing without several lives being lost in this way. Between the parishes of Covington and Pettinain on the west, and of Liberton and Carstairs on

the east and north, the Clyde seems almost to stagnate amidst the rich meadows by which it is surrounded; and for several miles its course is slow, and its waters deep. On approaching the parish of Lanark it resumes its former appearance, and flows along, in an expanded stream, over a stony bottom, till it approach the celebrated falls already mentioned. There, on account of the weight of water contained in the river, the height of the falls, and the scenery by which they are surrounded, the Clyde is an object of much curiosity. The uppermost fall, called *Bonniton Lin*, is about two miles and a half from the town of Lanark; and in visiting it the traveller has to pass by the principal fall, called *Corra Lin*. Between these two cataracts the river is enclosed by a wall of rocks; at the bottom of which, overlooked by tremendous precipices, it boils and foams over the shelving and broken rocks which continually interrupt its dark and horrid course. Along the eastern side of the river a romantic road is formed, with fine woods on the one hand, and the river roaring below, in a deep chasm, on the other. This road reaches from the house of Bonniton, near the Cotra Linn, to the uppermost or Bonniton Linn. Above the Bonniton or highest Lin the river exhibits a broad, expanded, and placid appearance, beautifully environed with plantations of forest-trees. Its course is towards the north-west, but it suddenly turns towards the north-east; and at the bending is the Bonniton Lin, where the river falls over a part of the stratum of rock which forms the termination of that along which the road already mentioned runs. From an elevated point above the cataract or lin the whole body of the river is seen precipitating itself, with a dreadful noise, into the chasm below, over the edge of a perpendicular rock. The height of the rock, including a small fall immediately above the perpendicu-

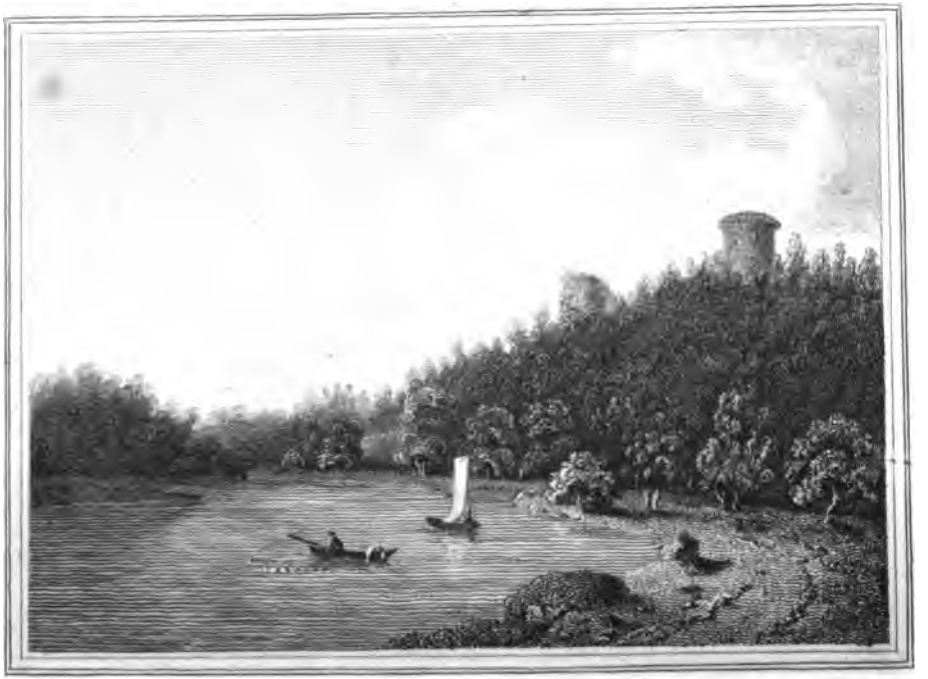
Water.

Falls of Clyde.

Bonniton Lin.

Waters. lar descent, is about thirty feet. From this fall the appearance of the river is suddenly changed; its course is contracted; and, as already mentioned, it angrily boils and thunders, among rocks and precipices, down towards the principal or Corra Lin, at the distance of half a mile. The traveller return along the precipitous path, already mentioned, which overhangs the river. We have said that its sides consist of walls of rock: these are equidistant and wonderfully regular, forming, as Mr Pennant expresses it, a stupendous natural masonry, from whose crevices daws and other wild birds are incessantly springing. These rocks are rendered the more pleasing, because every jutting corner is covered with natural wood, the shade of which augments the magnificence of the scenery.

Corra Lin. Corra Lin is best seen from a summer-house or pavillion built by Sir James Carmichael of Bonniton, in 1708, upon a high rocky bank which overlooks the fall. On the opposite side the old castle of Corra is seen, seated on a high rock over the fall, near which a modern mansion stands. The lin or cataract itself does not fall in a perpendicular direction; nor does the water descend in an uniform sheet as at the Bonniton Lin. The river follows a sort of circuitous course, being dashed from one ledge of a shelving rock to another, so as to form three different, though almost imperceptible precipitous leaps. Nothing can surpass the striking and stupendous appearance of the fall, placed as it is amidst the most magnificent natural scenery of woods and rocks; and when viewed from almost any spot, it can scarcely fail to strike with astonishment, and a considerable degree of terror, the unaccustomed beholder. The tremendous rocks around the aged castle upon the opposite bank, a corn-mill in the rock below, but upon the very summit of the fall, the furious



BANKS OF THE CLYDE & BOTHWELL CASTLE.

and impatient stream foaming over the precipice, the horrid chasm beneath the feet of the spectator, the scream of wild birds, and the thundering sound of the water-fall, whose concussion seems to shake the earth, all contribute to form a scene at once tremendous and pleasing. The Corra Lin is said to be eighty-four feet in height. From these falls the appearance of the Clyde, as already mentioned, and of its banks, is totally altered. Instead of a mild and calm river, softly flowing through level meadows in a wide and expansive stream, it becomes an impetuous torrent, deep ingulphed in a double range of steep and rocky hills, seeming impatient of its straitened course. The brooks which fall into it are somewhat of the same character. The rushing waters, the lofty and diversified rocks, the towering summits, the overhanging woods, exhibit altogether a scenery in which the beauties of nature are happily blended with the grand and sublime, and form a proper subject to warm the imagination and exercise the genius of the poet and the landscape-painter. To a Scottish imagination, the interest attending these scenes is powerfully augmented by the consideration, that in former times they formed the retreats of national independence, by affording places of safety to Wallace and his friends. Waters.

At a short distance below the Corra Lin is a beautiful and romantic fall, called *Dundaff Lin;* it is only a few feet in height. Near it is a rock, called *Wallace's Chair,* where he is said, on one occasion, to have concealed himself. Within view of this fall, in a low den, are four lofty cotton-mills, with a village attached to them; they will be afterwards noticed. The next fall of importance is the Stonebyres Lin, nearly three miles below the Corra Lin; it consists, in like manner, of three distinct falls succeeding one another, which altogether measure about Dundaff Lin. Stonebyres.

Waters. seventy feet in height. This cataract limits, in the river Clyde, the ascent of the salmon, as none can possibly surmount it, although at one season their endeavours are incessant. This is not less romantic than the other falls; wild rugged rocks are equally visible here, and they are equally fringed with wood; but the trees in the vicinity are not so tall and stately, consisting chiefly of coppice-wood.

At length, after a confinement of six miles, in a deep and rocky, but wooded glen, the course through which the Clyde flows gradually opens, the river expands, and, instead of being agitated among rude and steep rocks, it flows over a pebbled bed, through alternate tracks of sloping banks and fertile valleys, adorned in some places with a mixture of orchards and coppice-wood, and at others with tufts of forest-trees. Thus it proceeds for twelve miles, through the lower part of the parish of Cambusnethan, and the parishes of Dalyell, West Monkland, and Bothwell, on the north side of the Clyde; and those of Dalserf, Hamilton, and Blantyre, on the south. Here, along the banks of the river, the land ascends gently on both sides, exhibiting sloping banks and pleasing well-cultivated territory, which in all probability is inferior in beauty to no part of the island. Afterwards the appearance of the river, or rather of its vicinity, alters; bold banks, in the parishes of Bothwell and Blantyre, hem it in on each side. From thence they expand and contract alternately to the extremity of the county, exhibiting everywhere a beautiful variety: the same great materials, flowing waters, winding valleys, and swelling banks, form the ground-work of the landscape, both above the falls and in the lower part of the county; but the finishing of the one is entirely different from that of the other. In the former, Nature appears in the elegant

simplicity of an undress; in the latter, magnificently arrayed in her richest ornaments. The soil and climate seem to be much disposed to the growth of wood; and spontaneous copse-woods everywhere fringe the hanging banks. Besides the estates of great landholders, much of the land is parcelled out in moderate and small properties. The industry and judgment which so many people of all ranks have exerted to shelter their properties, and adorn their places of residence, have dispersed over the face of the country groups of trees, appearing in a beautiful disorder, as if scattered by the hand of chance. Numerous villages and hamlets contribute to enrich the scenery along the Clyde. The labours of a number of husbandmen employed in the improvement of the fields, have produced a verdure which smiles almost perpetually in different corners, to whatever quarter the eye is turned. Orchards embosomed in woods stand all along the Clyde by the foot of the rising slopes. Thus that beautiful variety, which the face of the country has received from the hand of nature, is everywhere heightened and improved. —As soon as the Clyde reaches Glasgow, it becomes a sort of appendage to the commerce of that city. The tide ascends along it, and it flows along a level tract with only a few feet of descent to Greenock. Waters.

All the other waters of the county flow into the Clyde. In the uppermost part of its course it receives from the mountains a multitude of streams; among which may be mentioned Elwin and Glengonar, because their sands were in former times washed for the purpose of obtaining gold dust: these are in the parish of Crawford. Another stream, called the Little Clyde, and a multitude of others, are only remarkable for containing abundance of trout, excepting in so far as any of them are at times injured by the washings of the mines in that neighbour- Secondary streams.

Waters. hood. Dunneaten water in Crawford-John parish, Coulter water, and thereafter the Midwayn, add considerably to the Clyde; but they are in no respect interesting. Douglas water, on the southern side of the river, with many subordinate streams which fall into it, such as the Glespine, Kennocks, and Manks, all abound in trout. Douglas water runs a course of about sixteen miles before it falls into the Clyde above Lanark. From the latitude of the falls of Clyde the waters which flow into it, or their banks,

Cartlane craigs on Mouss. become more interesting. Cartlane craigs, upon Mouss water, which enters Clyde nearly a mile below Lanark, are extremely deserving of notice. This is a curious and romantic den, about a quarter of a mile in length, bounded on either side by a reef of lofty, precipitous, and rugged rocks, which are fringed with coppice-wood on the north side, and with coppice-wood and thriving plantations on the south. The rocky bank on the north side is about 400 feet in height, and it is not much lower upon the south side. Both banks are finely varied with the different appearances of rock, wood, and precipice. At the bottom runs the river Mouss, which scarcely leaves room for the lonely traveller to traverse the den. However, here the celebrated botanist Mr Lightfoot clambered in search of plants, and discovered some rare and uncommon ones, as may be seen in his "Flora Scotica." At all the bendings of the Mouss, which are numerous, the scenery varies; and wherever a prominent rock stands forth on one side, the corresponding recess may be remarked on the other. A cavern in one of the rocks is still called Wallace's cave, in consequence of a tradition that it was once the hiding-place of that patriotic hero.

Logan water. In the parish of Lesmahago, on the southern side of the Clyde, the water called *Logan* rises in the mountains which divide that parish from Muirkirk in Airshire.

The Logan water, running eastward for six miles, joins the Nethan, which has its source in the same mountains a few miles to the east. The joint stream, which then takes the name of *Nethan*, runs north and east through the parish, dividing it nearly into two equal halves, and falls into the Clyde a little above where the parishes of Dalserf and Lesmahago meet. This is a beautiful pastoral stream; the banks of which are finely diversified with hanging woods, sloping pastures, and corn fields. Waters.

The river Avon rises on the confines of the parish of Sorn, in Airshire, and is augmented by a variety of small streams of little importance, particularly by the Givel, Calder, Lockhart, Kype, and Pometiers. It passes thro' a country by no means fertile, and of which only a small proportion is arable. It empties itself into the Clyde near the town of Hamilton. The banks of the Avon, as it passes through the Duke of Hamilton's park, are high and bold; and being covered with wood of various kinds, are extremely picturesque. On the northern side of the river Clyde, the banks of the waters called *Calder* are beautifully diversified by their deep course between banks frequently rocky and covered with wood, and at times opening so as to form beautiful valleys. The water of North Calder rises from the Black Loch, in the parish of East Monkland, and continues its course westward for about fifteen miles, till it falls into Clyde, and for seven or eight miles separates the parish of Bothwell from the East and West Monkland. The water of South Calder rises from several marshes and fens in the parishes of Shotts and Cambusnethan, and having continued its course for fifteen miles, falls into the Clyde a little below Orbiston, in the same parish of Bothwell. They are generally shallow in summer; but in winter and rainy seasons they pour a great quantity of water into the Clyde. The stream of

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the North Calder is considerably lessened by the water being taken into the Monkland canal at Woodhall. These two waters are chiefly distinguished for the romantic scenery of their banks; upon which account all the gentlemen who live in that part of the country have placed their seats adjacent to one or other of these two Calders.

State of property.

Upwards of three-fourths of the lands of this county are the property of great landholders. Those who are resident have generally a certain portion cultivated under their own direction. A considerable extent of enclosed land is kept mostly in grass, and let out from year to year for pasture; a few crops of corn being taken only at distant periods, and the ground again sown out with grass seeds: but the greatest part is cultivated by permanent tenants. The term at which a new tenant enters upon the possession of the land is Martinmas; but the houses and pasturages are retained by the former possessor till Whitsunday following. Of late the old tenant is usually taken bound to relinquish to the new one half the grass grounds, and lodging for labouring servants and horses at Candlemas. The most common length of leases is nineteen years; some are now for thirty-one years.

Horses

The most remarkable circumstance which occurs in the rural economy of this county is that which takes place in the Upper Ward relative to the breeding of horses, which are here reared of a kind that is in great request over the whole country. It would appear that our ancestors, in former times, were accustomed to rear great numbers of horses. The profitable use that was made of them seems indeed to have been very trifling. The high roads were too defective to admit of the use of wheel-carriages. Oxen appear to have been chiefly or exclusively employed in the plough, and farmers generally used horses for carrying their corns to the barn-yard, to the mill, or to the

market; but immense numbers of horses were at all times used by persons of rank in travelling, as well as by the nation in war. Of the numbers used in travelling, the following instances from Rymer's *Fœdera* will suffice: Agriculture.

1342, David Bruce travelled with 40 attendants on horseback
His queen, with.....60 ditto
1340, Certain ambassadors from Scotland had .....200 ditto
1370, Alexander Lesly.....70 ditto
1368, The Earl of Mar .....30 ditto
Countess of Douglas .....20 ditto
Three merchants.....10 ditto

But the chief employment of horses was for war and inroads. The whole army was sometimes mounted on horseback. Randolph Earl of Murray and Douglas made an incursion, in 1327, into England, in Robert Bruce's reign, with no less than 20,000 horse. It appears that the taste for breeding horses must have been very general, as the exportation of them to England was a profitable branch of commerce, carried on by men of the highest rank. We have several instances of this in Rymer's *Fœdera*. In 1359 Thomas Murray Dominus de Botlwell, Panetarius Scotiæ, and Allan, second son of William fifth Lord Erskine, obtained a passport to come into England with horses for sale; and the grooms and servants of the Earl of Marr obtained the like for coming into England in the year 1361 with a full-bred war-horse and two smaller-sized horses. By a narrow policy, this trade was restricted by a statute of David Bruce in 1369, imposing a tax of one-sixth of his value upon every horse carried out of the kingdom. This prohibition was not strictly executed; for licences were obtained from the sovereign dispensing with the statute. James the First, a politic History of Scottish horses.

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prince, finding that the trade in horses was an advantage to the country if properly regulated, departed from the statute of David, and allowed horses to be exported, providing they were three years old, when they were ready for use; and the owners would be enabled to pick out the best for their own work, as at that age the nature and temper of the horse would be more certainly discovered. We learn that James the Second, whose sister was married to Sigismund Duke of Austria, brought horses and mares from Hungary to amend the breed. The size of horses was much studied in the next reign. The two younger sons of James the Second, *viz.* the Duke of Albany and John Earl of Marr, as Lindsay of Pitscottie informs us, were great admirers of what he calls great horses; that is, horses for war or tournaments. The taste still prevailed during the reign of James the Fourth, who was fond of feats of horsemanship. He sent his grooms to Spain, and brought home twelve horses and mares; likewise to Poland, in 1509. Lewis the Twelfth of France sent a present to the king of Scotland of the best French horses; in return for which James sent four of the most choice amblers, which in his letter he says were proper for running and hunting, and promises to send more and better ones when he could get them. James the Fourth promoted more the race of swift horses than of great horses; for he was accustomed to make frequent speedy circuits through his dominions. One instance is told us by Lesly of a journey made by this prince from Stirling by Perth and Aberdeen to Elgin, a distance of 150 measured English miles, in one day; which, even supposing relays of horses, shows the fleet horses he used in this excursion.

In the reign of James the Fifth, horse-racing was much in fashion among persons of all ranks; and it would seem that in the reign of Queen Mary, the breed had been

greatly improved; for the French, who remained long in the country at the time, perceiving the good qualities of our horses, when they quitted Scotland, not only carried many of them away, but commissioned many more, which were accordingly sent off for Bourdeaux in 1565 and 1566. So that Regent Murray, in the first parliament held by him in 1567, discharged the exportation of any kind of horses whatever to any part beyond seas, under forfeiture of the ship and cargo, whether by strangers or natives. The cause of this prohibition appears to have been a spirit of hostility against France, adopted in consequence of the reformation, and of the ascendency which Queen Elizabeth's government had acquired in Scotland. Agriculture.

After the accession of James the Sixth to the throne of England, every thing went to ruin in Scotland; for nearly a century few efforts towards any sort of domestic improvement were made, and the breed of Scottish horses appears to have totally degenerated. At present, however, it may without exaggeration be asserted, that no place in Europe can produce better horses for draught than Lanarkshire. The breed was introduced into Scotland more than a century ago by one of the predecessors of his Grace the Duke of Hamilton. He brought into the country six coach-horses, all stallions, originally from Flanders, and sent them to Strathaven, the castle of which was then habitable. They were of a black colour and extremely handsome. The farmers of the neighbourhood, readily embracing the favourable opportunity, crossed this foreign breed with the common Scottish kind, and thereby procured a breed superior to either. From this a strong and hardy race of horses was soon spread through the country; but in many places, owing to neglect, was left to degenerate. Much praise, however, is undoubtedly due to the farmers in the upper part of Lanarkshire Origin of the present breed.

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for their unremitting endeavours to improve this valuable race of animals. They attend with the utmost minuteness to every circumstance respecting the softness or hardness of the hair, the length of the body, neck, and legs, but chiefly to the shape of the back, breast, and shoulders of their breeders. Almost every farm through the extent of several parishes supports five or six mares, the half of which are allowed to have foals annually. The colts are generally sold at the fairs of Lanark and Carnwath, or of Rutherglen and Glasgow. They have found their way into all quarters of the country. Those of a smaller size are well adapted for the plough, on account of their quick step and steady draught, and those of a larger size are employed in carts upon the high roads. From a ton to twenty-five hundred weight is in the neighbourhood of Glasgow a common load for a one-horse cart, independent of the weight of the cart itself. The late Gabriel Watson, a carrier between Glasgow and Edinburgh, considered twenty-four hundred weight as the proper loading for each of his horses.

Climate.

The agriculture of this county must necessarily depend in a great degree upon its climate. The lower end of the county is situated in a narrow isthmus, not much more than thirty miles broad, between the Forth and Clyde, which opens gradually to the sea on each side of the island, admitting the temperate breath of the sea-breeze. The wind is computed to blow about two-thirds of the year from the south-west and west over a vast ocean, where no land intervenes to prevent it from coming to the coast saturated with the moisture of that element. The winds from the easterly points, which, coming from the continent over a narrow sea, are sharper, blow less frequently, and their force is somewhat broken by the high land on the east side of the county; so that the cold

damps called *easterly hars*, so prevalent on the east coast, seldom arrive here; consequently the cold is moderate. Intense frost is seldom of long continuance, and deep long-lying snow is rare. Hence there are few spots on which the verdure of the year is longer intermittted. On the other hand, the most frequent winds, coming over so wide an ocean, are fraught with vapour, which frequently overclouds the sky, cools the air, and renders the summer's heat less intense; so that it is frequently scarcely sufficient to ripen the fruits of the earth. These vapours, interrupted by the neighbouring heights in the counties of Renfrew and Dunbarton, fall in frequent and heavy showers on the northern parts of the county. In going up the Clyde, the surface flattens; scarce a mountain between the river and the ocean raises its head to catch the clouds; and the current of air passing without interruption across the country, the rain is less. Agriculture.

Next in frequency to the south-west wind is that which blows from the north-east, which for the most part is accompanied with fair weather. The heaviest and most lasting rain, but not the most frequent, is from the south-east. The wind seldom blows long from the south without bringing rain; and this rain is heavy, but of short continuance. The rain from the west and south-west comes in repeated showers, between short intervals of fair weather; and the greatest quantity of rain comes here from the latter; which, as the wind blows much from that quarter in the beginning of the year, generally drenches the ground greatly before seed-time. Rains from the north-west, north, and north-east, are neither frequent nor heavy, but sullen and unnourishing. The north-east wind is most frequent in the months of April and May; it sometimes sets in in March, and is of great importance in preparing the ground for the reception of the seed. In

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a country where there is almost everywhere an understratum through which no water can filter, in spite of every attention to draining, the land is soaked with water, which can only be drained off by means of exhalation; and ground of this kind is not in a condition to exert its powers till the cold sluggish moisture of the winter is exhaled. When a course of dry weather does not happen, therefore, in due season, the seed-time must either be deferred to a late period, or the seed committed to the crude soil will make but a slow and imperfect progress. This is one cause of the lateness of the Lanarkshire harvests.

Mosses affect the climate.

There is reason also to suspect that the immense quantities of peat-earth found in this county have a tendency to produce an unequal climate. It is certain that the moss-plants retain moisture with wonderful obstinacy; and as evaporation is one of the most powerful means by which cold is generated, it can scarcely fail to happen that the extensive tracts of moss which are here found must have a powerful tendency to sink the temperature of the air and of the soil in their neighbourhood. Accordingly, after a severe winter, the vestiges of frost are frequently to be found in the mosses when the summer is far advanced, and when nothing similar appears in the rest of the country. At all events, there can be no doubt that the high lands, where these bodies of peat-earth abound, are less fertile than they have been in early times. Neither the stately oak, nor its accompanying brushwood, now appear where they once flourished abundantly, and now lie buried together under the torpid chaos; nor can the utmost industry restore them in that vigour with which, in former ages, they have spontaneously grown. The oak particularly, now planted on the best soil in the midst of a thicket, will barely live, while perhaps within a hundred yards one of a magnificent size may be found.

lying beneath a bed of moss, where it may evidently be seen, by its roots, still fast in the soil in which it had been produced. Agriculture.

Proceeding up the Clyde, the island becoming broader, and the situation farther distant from the mouth of the river, the influence of the sea-air diminishes; the eminences in the ward being more frequent and of greater altitude, give more interruption to the current of air from sea to sea, and the climate is more similar to that of a continent, the summer's heats and the winter's colds being more steady and more intense. There is more rain above the falls than in the rest of the ward; but, from the nature of the soil, it is seldom injurious to the husbandman excepting in the time of harvest; nor are the summer's droughts so hurtful. Ascending to the upper extremity of the county, another change takes place. The highest summits intercept the clouds, and occasion frequent rains; frequent mists hover on the hills, obscuring the sky, and cooling the air. The summer heats are often interrupted by cold gusts; the winters are cold and tedious, long retaining on the surface the heavy snow which falls in that tract.

In the higher part of the county, around Tintoc, the turnip husbandry has been practised with great success for almost thirty years. Near Biggar, Carnwath, and other villages, large quantities of potatoes have also been long cultivated with the plough. In many farms, in which land of a moorish quality prevails, turnips are introduced with great success for feeding both cattle and sheep in winter. The rotations of crops are very various in this district; but the two following are frequent. By the first, the whole arable land is divided into eight parts, and each in its turn undergoes the following rotation: 1st year, fallow or turnip in drills, and dunged, and a portion in potatoes; 2d, barley, and sown with grass- Rotations.

Agriculture.

seeds; 3d, hay; 4th, 5th, and 6th, pasture; 7th and 8th, oats. According to the second, the half, or as much of the farm as is judged convenient, is laid out in four divisions, each in its turn managed as follows: 1st year, fallow or turnip, &c.; 2d, barley or oats, with grass-seeds; 3d, hay; 4th, oats. The remainder of the farm lies in grass, and is pastured by the dairy cows, cattle to be fattened in winter on turnip, &c. In the light lands, in the lower part of the county, potatoes planted in drills, and fully manured, are used instead of summer-fallow, and are followed by wheat and grass seeds. On the 3d and 4th year, crops of hay are taken; and on the 5th the land is croped with oats; after which the rotation begins anew. In the clayey soils in the same neighbourhood summer-fallows are thought necessary. Beans succeed the wheat, and oats with grass-seeds succeed the beans. In the middle and upper districts oats form a very frequent crop; and a variety of practices prevail, from the ancient and most barbarous to the newest and most approved. At the same time, it may be remarked, that, upon the whole, agricultural improvements are carrying on in this county with great activity and skill; and wherever the land is not entailed, and thereby withdrawn from commerce, but in such a situation that enterprising men can obtain possession of portions of it, the most rapid improvements are making.

In general, it may be observed, concerning the cultivation of this district, that wheat is sown on the lower parts of the county wherever an opinion exists that it will prosper. In the higher lands, however, the climate is found too severe. It is always sown in autumn; but it seems probable that three-fourths of the grain sown consists of oats. Peas and beans seldom come to perfection in high exposures, and therefore are chiefly cultivated on the low-

er grounds. They are sometimes sown separately, sometimes mixed, and very rarely in drills. Small quantities of flax are sown thro' all the county; and in some particular places a good deal is annually raised. The spring seed-time is very uncertain, depending on drought occurring sufficient to dry up the winter's moisture. It is sometimes begun about the end of February, and sometimes scarcely finished against the first of May. Potatoes are planted from the middle of April to the middle of May, principally in drills made by the plough, from two feet six inches to two feet nine inches asunder. Barley is sown from the middle of April to the end of May; turnips from the end of May to the 10th of July, and in dry early land sometimes later. Few field-cabbages or greens for feeding cattle are yet cultivated. The grasses cultivated are red, white, and yellow clover, rye-grass, and rib-grass. The seeds of the *bolcus lanatus*, and of some other native grasses, either saved in the fields or collected in hay-lofts, are sometimes sown instead of rye-grass. Sometimes only red clover is sown along with a little rye-grass; sometimes a mixture of more or all of the above are sown on the same field, according to the purpose for which it is intended. Grass-seeds are either sown among young wheat in the spring, or along with oats or barley. Grass after wheat generally succeeds the first year, but is better the second year when sown with barley. Agriculture.

No marl of a valuable quality has been hitherto found here; and, lime excepted, no fossil has been used as a manure: but there is some reason to think that the earth frequently contains in its bowels substances capable of renewing its surface if the proper application of them were understood; and it would be a matter of great importance that experiments were set on foot for making such discoveries. Lime is applied either upon fallow or grass Lime manure.

Agriculture.

grounds, at the rate of from 300 to 600 Winchester bushels *per* acre. The first time land is limed, its fertility is visibly increased. If it is moderately cropped, and allowed to rest for several years, the effects of the second liming are still more considerable; but all after-limings have very little effect; and there is now land in this county on which it proves quite vain to lay lime alone. For which reason, those who cannot procure enough of other manure compound lime with scourings of ditches, cleanings of roads, and some kinds of surface-earth, having a close turf of grass with a little dung between the layers of earth. This has been found to answer the expence when lime alone would not. It has been found very beneficial to lay lime upon well-swarded pasture, and allow it to lie on the surface for two or more years before the land be ploughed and cropped. Where two or three corn crops are taken at a time, and the land left long in grass before being again broke up, the meliorating effects of this practice have been almost incredible.

The dairy.

In ancient times, the practice prevailed in this county of keeping great numbers of milk-cows long before the profits of the dairy became considerable, or the management of it was understood; it being thought necessary to keep constantly a number of cattle for making dung to recruit the arable land. The feeding of veal was the first object of profit. On the elevated lands, where the harvest is less perfect, part of the unripened oats were taken to feed the milk-cows, which increased the quantity and richness of their milk. The calves, which were brought forth about the latter end of harvest or beginning of winter, were fed at first with the milk of their dams, and afterwards with the thicker milk of those which were beginning to dry, having been taught from the first to drink all that they got. In this manner rich veal was fattened, and, from

Christmas onward, was sent to supply the tables of the wealthy in Edinburgh, where Lanarkshire veal has been long famed, and bought at exorbitant prices. That in particular reared near the Avon, or Strathaven veal, has been long celebrated. In the progress of improvements in this country a better provision of winter-food for cattle has gradually been made; and by feeding milk-cows with potatoes, turnips, &c. the practice of fattening veal has been much extended of late; so that, though the increase of wealth and luxury has greatly enlarged the demand, the rise of price on this fine veal has not been in proportion to that on other kinds of provisions. However, in all places distant from markets, it is still considered as the most advantageous way to dispose of winter-milk. As the prices of butter and cheese advanced, the owners of dairies by degrees became more studious, not only to increase the quantity, by paying more attention to the feeding of milk-cows, but to ensure a preference in the market, by adapting the quality to the taste of the best customers. The dairy business is conducted three ways in this county. Either the whole milk is made into cheese, or butter is made of the cream, and cheese of the skimmed milk; or in the most populous parts of the county, where there is a great demand for butter-milk as an article of food to the poor, the whole milk is churned. People are induced to adopt any one of these ways, either from situation or from some circumstances of supposed conveniency. It is understood in this county, that upon an average eight Scottish pints (upwards of fifteen English quarts) of new milk, or the cream taken from it, produces a pound of butter of 22 ounces avoirdupois. Hence 80 such pints produce 10lbs or 220 ounces of butter; and after the cream is removed, 70 pints of milk remain for cheese. This quantity of skimmed milk is sufficient to produce a stone of cheese, of that

Agriculture.

Strathaven veal.

Agriculture.

degree of dryness at which it is accounted marketable. A stone of cheese may be produced from about 53 Scottish pints of new milk. The dairy in this county is considered as, upon the whole, the most profitable mode of using cattle, and is accounted superior to fattening cattle, or fattening sheep. Its produce is never equal to the demand, so that the market encounters little fluctuation. It does not withdraw a farmer from attention to his farm, for the purpose of attending markets, like the grazing system; and by keeping milk-cows, properly fed and attended, in the house, the greatest possible quantity of manure for the improvement of the land is obtained. At the same time, a considerable quantity of enclosed lands are employed in grazing. Both potatoes and turnips are in this county used as the winter food of milk-cows, and also for fattening cattle in the stall. Potatoes are thought to have the quickest effect when boiled. They have been found a very frugal and hearty food for horses.

Enclosures.

A fondnesss for enclosing exists very powerfully in this county, and ought undoubtedly to do so wherever land is not to be kept permanently in tillage, but to be frequently employed for pasture. The most common mode is by hedge and ditch, the hedge being planted in the face of the mound of earth taken out of the ditch. In many places, however, these fences have proved defective, on account of the hedge being thus planted, not in rich vegetable mould, but among the ungenial mineral substances which had never been fertilized by cultivation. It is unfortunate, that in the lower part of the county, the stone, tho' near the surface, moulders when long exposed to the air, and is therefore not durable when used for fences.

As the middle part of the vale of Clyde is sheltered by the ascending country to the eastward from the blasts which from that quarter prove prejudicial to the early

blossoms upon fruit-trees, this is considered as one of the most favourable situations in Scotland for orchards. The Clydesdale orchards lie mostly between the lowest fall of the river and the mouth of the South Calder. They are chiefly of apple-trees, with a large mixture of pear-trees, and some of plums. Few of the orchards are large; but many small ones are planted in different quarters, though it is scarcely supposed that they amount to more than between 200 and 300 acres. Even on this favourable spot, however, the produce of the orchard is considered as precarious, the fruit being often destroyed in the blossom by spring-frosts and caterpillars. In some years, the value of fruit in this district has been thought to amount to between L. 2000 and L. 3000. The quantity of the fruit is thought to be greatly increased by cultivating the ground around the trees, and using it for a kitchen-garden, or the like purposes. The kinds commonly cultivated are,

Agriculture.

Orchards.

APPLES.

Early and Summer.—Junetine, amber, chucket-egg, lady apple, lady's lemon, summer strawberry, Milford, American pippin, kailbed, Dryly pippin, gairien, &c.

Middle or harvest.—White cluster, queen of England, white Ledington, bloodheart, Dumbarton pippin, whistleberry, salmon, common codling, lemon pippin, Hamilton pippin, Moncrief, marrow, lady's finger, &c.

Late or Winter.—Yorkshire greening, nonpareil, green Ledington, gray Ledington, winter strawberry, golden pippin, pearmain apple, Hawthornden, naked apple, nonsuch, green cluster, green calander, Ely, Falwood, golden Monday, grass-apple, redstreak, coalhouse, Corstorphine, sheephead, carse of Gowrie, pursemouth, royal codlin, and severl sorts of russets.

Agriculture.

PEARS.

Summer.—Fair maid, Crawford, juncas, green pear of Pinkie, early lemon, lady's lemon, Kedder, gold knap, minister, jargonel, farrow cow, saffron, &c ribhead early.

Harvest.—Swan-egg, corneck, bergamot, vicar, bush, laugh, gray goodwife, bishop, Longoville, gray Henry, ribhead, &c.

Winter.—Moorfowl egg, achan, brier-bush, winter bergamot, winter warden, pear iron, pear Wilson, &c.

Woods. There are scarcely any instances of spontaneous coppices above the uppermost fall of the river; but some of the principal landholders of late have done much to adorn the country with planting. In the early part of the present century, except a few trees about some of the houses, this part of the country was quite naked. There are now about 1800 acres planted, three-fourths of which at least have been done in the last 20 years. The trees are of various kinds; but the Scots pine and the larix are the most prevalent. From the top of the falls downward, coppices arise every where near the sides of the river and the streams which fall into it. These consist of oak, ash, birch, elm, alder, &c. intermixed with hazel and other shrubs. Of these it has been computed that there are 760 acres in the lower part of the Upper Ward, besides a quantity of planted wood sufficient to make the whole extent of territory in the Upper Ward that is covered with trees amount to considerably above 3000 acres. In the Middle Ward the coppice woods extend to near 1400 acres, and the planted woods to twice as much. In the Lower Ward there are few planted woods or coppices; but hedge-rows and narrow stripes of trees give the country a cloathed appearance. Coppice woods are usually cut once in 25, 26, or 30 years; and they are sometimes divided into lots, so as to afford an annual cut-

ting. Formerly there was no kind of trees planted, to any considerable extent, but the Scottish pine; and there are still more of this kind than any other, it being planted to protect the deciduous kinds. When this is the case, it ought to be cut down before the others grow too tall and weak. When it is planted unmixed, it is reckoned the best practice to put the plants pretty close together, about 6000 to an acre; so that by the support they derive from one another they may grow up straight and tall, and the tops meeting, may exclude the air, and smother the under branches while they are still small and weak. This is called *pruning themselves;* and is found to be the best way for preserving the health of the trees, and obtaining valuable timber. It is absolutely necessary that open drains be made through all the hollows, that no water may stand. When the trees are about ten feet high, and no living branches upon them except near the top, one-half is cut down, and four or five years after the half of what remains. What future weedings may be found necessary must be done with great caution, as the opening of any avenue which may admit a stream of wind endangers the whole plantation. The abundance of coal and peat in this country renders the first profits of planting inconsiderable; but in the lower and more popular districts, every sort of wood finds a market. The larix is now considered in this county as the most hardy alpine plant. In most places it makes greater progress than almost any other tree; and there is scarcely any soil in which it does not succeed. The birch is next to it in rapidity of growth, and in ability to resist the blast. In general, all soils which lie immediately over the freestone rock are much disposed to produce wood, and almost all kinds of trees thrive in them. Land lying on a quick declivity, where the water issuing from the veins of the earth flows freely

Plantations.

Plantations. away, is very favourable to the growth of wood. It has been remarked, that trees planted by the winds or by the birds thrive better than those attempted to be reared by man. Whether it be that trees thus sown do not take root unless upon their appropriate soil, that the seeds of plants thrive better in the surface than when buried in the bosom of the soil, remote from the action of the atmosphere, or from whatever cause, it certainly does happen, that wherever these children of nature and of art meet on the same spot, the superiority of the former is conspicuous.

Roads. Turnpike-roads were introduced into this county about the year 1755, when roads were made from Edinburgh to Glasgow by the Kirk of Shotts, and by Hamilton to Air. Unfortunately, when these and some other costly undertakings in road-making were set on foot, the principles of that important art were by no means fully understood. The ancient roads usually proceeded in what seemed, on the whole, the straightest line to some known point, and from thence onward to another point or place. The first artificial or turnpike roads followed nearly the same principle. Little attention was paid to avoiding steep acclivities; and almost the only object attended to was to construct roads that should be smooth and firm, instead of the former rugged and miry ones. Men did not reflect that it is usually as near to go round the bottom of a hill as over the top, and that a horse can carry many times the weight in the one direction than he can do in the other. These first errors have now been remedied, though at great expence; and this county is now in every quarter accommodated with excellent roads, formed in the best manner. In particular, the road from Edinburgh to Glasgow by Airdrie has been conducted with such skill as to afford a tract almost perfectly level between these two cities. It may be remarked, however, that all the world are not yet perfectly reconciled to this plan of seeking out

a perfectly level tract for roads. Those who travel on horseback or on foot complain that it renders their journey dull and monotonous, and deprives them of the amusement to be enjoyed from the survey of the variegated surface of our country. It is also alleged, that in those stages where the road is most perfecly level, post-horses are most rapidly worn out. If this last assertion be true (of which we have some doubt), it can only be accounted for by supposing that, from the velocity of career which these roads allow, added to the constancy of draught, the horses find their lungs more severely affected than when they are allowed to ascend steep places with some degree of slowness, and on arriving at rapid declivities have their chests totally relieved from the pressure of the harness. The point, however, is curious, and might deserve investigation. Roads.

The mineralogy of this country would afford a rich field for extensive and curious investigation, of which, however, we can only here give a slight outline. We have already said that the upper part of the county in general rests upon an immense tract of whin-rock, standing in perpendicular columns or thin laminæ on edge. It is mostly so in the lower ridges; but there are instances of it lying horizontally like the free-stone and lime. It is of a close texture, and composed of very minute particles. Whether it be, as some have supposed, the lava of ancient volcanoes, or whatever may have been its origin, it differs widely in its texture, as well as in its nature, from free-stone; and this difference may probably be one of the chief causes of the difference in the fertility of the soil between the upper and lower parts of the county. The hard whin-stone rocks exfoliate when exposed to the air; and wherever their minute particles are lodged, a deep verdure arises; whereas reduced or pounded free- Mineralogy. Whinstone.

Mineralogy

stone is no better than barren sand. A minute and judicious chemical analysis of the different sorts of whin-rocks, whose ruins are thus productive of fertility, might throw some light upon the theory of the food of plants.

Free-stone and lime.

From the lower extremity of the county upwards, to above the falls of the river, some kind of free-stone is the most general rock; nevertheless different ridges of whin-stone run along through the heights on both sides, appearing sometimes on the surface, by which these ridges may be traced from the rocky mountains downwards through the whole extent of the county. The free-stone is continued probably through all the lower parts of the country; but the regularity of the strata is frequently interrupted, and one edge sinks deep while the other is raised. It is found all along the river, and the streams which fall into it, frequently approaching near the surface, and is much used in building. Lime lies in the same tract of country as the free-stone, but is only found near the surface in places which are somewhat elevated after the free-stone; and many of the strata below it, to be after mentioned, have skirted out at the surface, and are no longer found. It is most frequent on the south side of he river, viz. in the parishes of Kilbride, Avondale, Glassford, Stonehouse, Lesmahago, Douglas, and the higher part of Hamilton. On the north side it is found in Carnwath and Carluke parishes. Both these kinds of rock lie in a position nearly horizontal.

Great coal-field on Clyde.

Under the free-stone lies the great field of coal for which Clydesdale is celebrated. It is to be observed, that here, as upon the Esk in Midlothian, the mineral strata follow the inclination of the upper surface. In this district they all lie inclining towards the river on both sides, with various degrees of declivity, ascending as they recede from the Clyde, till they reach the surface, or, as it is expressed by the miners, crop out one after another.

Hence it often happens that the first seam of coal which is found at one mine is perhaps the third or fourth at another. The seams or strata of coal extend through all the plain country, and branch out, less or more, along the course of the principal waters, to a great extent, remaining in thinly inhabited quarters almost untouched, and affording a prospect of an almost inexhaustible fund of fuel. Mineralogy.

In those places where the whole strata or seams of this valuable mineral remain beneath the surface without any of them having cropped out, in descending a mine a number of thin and less important seams or strata of this valuable mineral are found above that which is generally called the *upper coal*, because it is the first that is found worth digging to any extent. This stratum is composed entirely of what is called *rough coal* in Scotland, except a small part near the middle of it of the kind called *splint*. Strata of coal described.

2*dly*, About sixteen or seventeen fathoms under this lies the *ell coal*, so called because it was first found of this thickness; but it is frequently from four to six feet thick. It is composed of two kinds, called *yolk* and *cherry coal*, with sometimes a parting of splint. This is a fine caking coal, or what is called in England a *close-burning coal*, and is much esteemed for the blacksmith's forge. 3*dly*, At from ten to seventeen fathoms below the last lies the seam called the *main coal*; so called from possessing all the good qualities found in any of the other strata of the county. It contains *rough coal*, *splint*, and *parrot* or *jet coal*, and is preferred by the consumers to all the others as the most profitable. Its thickness is from three and a half to nine feet. Sometimes a thin bed of stone is found about the middle of the seam; and in that case the whole thickness is ten feet. 4*thly*, About thirteen or fourteen fathoms lower lies the *humph coal*. It consists of *yolk* and *rock* coal, with a thin parting of *splint*. In some

Minera-logy.

places it is without the splint, and unworkable, being much interlaced with thin laminæ of stone, and a kind of petrified black clay called *blaes*. 5*thly*, Below the humph coal lies the *hard coal*, sometimes at fourteen fathoms distant. It consists solely of splint and parrot coal, and is found to be the best in the county for smelting of iron; it is also very good for family use. 6*thly*, At a fathom and one-half lower is found the *soft coal*, from thirty inches to six feet thick. It is composed of the rough yolk and cherry coals, cakes much in burning, and is esteemed a good coal for the blacksmith's forge. 7*thly*, About thirteen or fourteen fathoms below this lies a coal called about Glasgow the *sour milk coal*, as it burns slowly, and affords but a weak heat. It is what the miners call a *lean coal*, and has therefore been but little wrought. There are a number of thin seams of coal under the sour milk coal, all of a lean quality, and generally much interlaced with laminæ of stone, blaes, or shiver. Under the last mentioned have been found several strata of excellent lime; and more of the thin seams of coal again have been discovered under the lime; but all of them which have yet been tried are of a lean quality. The lime found near the surface on the elevated grounds is supposed to be a continuation of some one or other of the last mentioned strata found under the coal, which in the course of their natural rise have come within reach in the places where the superincumbent strata of coal, and all its accompanying fossils, did not exist, as lime worth the working has never yet been discovered above these coal strata, nor in any place, till after all the valuable known seams of coal had skirted out at the surface; and any coal which has been found under the surface-lime is of the same lean quality with that which lies under the deep buried strata of lime.

Besides these strata of coal, there are others in the county, of a somewhat different nature, and of a different arrangement. The high ground in the parish of Shotts deserves particular attention. The upper part or summit of these hills is of the same elevation, or nearly upon the same level, with a great part of the Upper Ward. Accordingly, like it, the highest tract around the Shotts consists of an enormous bed of whin-stone rock; but on descending along the side of the Shotts hills, the free-stone rock appears, and is found to be placed horizontally beneath the vast cope of whin-stone; and beneath the free-stone, coal, iron-stone, and lime-stone, are found in such immense profusion, as to set at defiance every sort of calculation relative to the period at which it is possible for human industry to exhaust them. The coal found here is similar to that upon the banks of the Forth. On the Douglas river also extensive collieries are wrought of a similar quality. It supplies the highest districts of the county and of Tweeddale, where coal has not been found. The most remarkable circumstance attending the coal at Douglas is, that the coal-field is intersected by a great number of steps that throw the coal down from thirty to fifty feet perpendicular. These steps are from sixty to two hundred yards separate, and lie nearly parallel. We formerly mentioned the varieties called *blind coal*, and *candle coal* or *light coal*. These are also found in some districts of this county. The blind coal must undoubtedly have been deprived of its volatile parts by means of subterraneous fire. It is used for the same purposes as coke or mineral charcoal, and is even preferred to that artificially made. The blind coal is always under a covering, or in contact with a wall of whin-stone; and when the same seam is traced till it come under the free-stone rock, its qualities are entirely chan-

Mineralogy.

Shotts coal.

Douglas coal.

Candle and blind coal.

Mineralogy.

ged, and it becomes in every respect the common pit-coal. Hence theorists have supposed that the whin-stone, when in a state of fusion from heat, had in some unknown age distilled off the bitumen from the coal, and left it a cinder, as it is now found. The candle or light coal, when found alone, and in its perfect state, is exquisitely inflammable, beginning to flame like a candle on coming into contact with the fire, so that a fragment of it may be carried in the hand like a torch.

Iron.

Iron is another mineral that abounds in this county. What is called the *ore*, that is to say, the mineral in its richest natural state, as it is found in the island of Elba in the Mediterranean, and in some quarters of England, has not hitherto been discovered here in such abundance as to attract the attention of the miner. Iron is found in the same tract of country as the coal, and is the constant concomitant of that mineral. Many beds lie between the different seams of coal; they are usually wrought together; and the iron-stone is sold to those who have established works for the manufacture of iron. Iron-stone is either found in the form of beds of rock, or in beds of ferruginous nodules, or iron-stone balls, as the workmen call them. The balls are of various shapes, dimension, and qualities; and the situations in which they are found are not nearly the same. With regard to their shape, they may be divided into two kinds; such as are of a regular and such as are of an irregular form.

Iron-stone balls described.

To the former belong the curious fossil called *ludus Helmontii, septarium*, or *waxen veins*. It is of a spherical shape, more or less oblate or depressed. Paracelsus, who had the cubic pyritæ in great esteem for dissolving the stone, called these bodies, from their resembling a die in shape, by the general name *ludus*; and Van Helmont afterwards, mistaking the bodies here described for the ludus of Pa-

racelsus, gave them in the same cases of disease, and called them by the same name. Hence the Latin name of *ludus Helmontii*. The English one is acquired from the resemblance of the *talc* in some species, but of the *septa* in many more, to yellow wax in colour.

These very singular stones are found in a great variety of situations. Mr Ure, in his history of Rutherglen and East Kilbride, gives the following account of them in that quarter. "The strata of schistus, in which they are imbedded, begin to appear near Calderwood, and extend more than a mile towards Crossbasket. Above and below them are several alternate strata of iron-stone and schistus. They lie in a regular direction, making a kind of interrupted stratum, one stone being several inches, and often a foot or two, separated by the schistus from another. They universally lie on their depressed sides. In one stratum of till there are two rows, at a few feet distance from each other, and keeping the same direction. The iron-stone of which they are composed is of an excellent quality, yielding about 50 *per cent.* of iron.

"What renders them a striking example of the curious and admirable workmanship of nature is their internal structure. They are beautifully subdivided by *septa*, generally filled with a calcareous rhomboidal spar or pyrites. Not a few of them contain, along with the spar, a considerable quantity of petroleum, which sometimes fills the whole of the spaces between the talc. In some specimens, if a section is made perpendicularly, the one-half of the stone is wholly subdivided with pitch, and the other with spar. Specimens of this variety are extremely rare. Besides, there is another variety equally, if not more uncommon. Instead of petroleum, the ludus Helmontii contains coal. This, however, does not subdivide the talc by way of septa, but runs chiefly in a hori-

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zontal direction. The coal is of a good quality; it breaks easily into quadrangular fragments and smooth glossy surfaces; it burns with a bright flame, is not liquified by heat, is reduced to a white soft ash, and has not the smallest appearance of ever having been charred. The stones in which the coal is enclosed are found in the same stratum with the rest, and are generally pretty large. The diameter of one from which I obtained specimens of coal was nearly four feet.

"Ludi Helmontii are sparingly found at Stonelaw, in a stratum of till above coal. They are chiefly of the variety in which the talc is enclosed with calcareous spar. The surfaces of some specimens are beautifully reticulated by the sparry septa, which are prominent above the talc about one-eighth of an inch. In a variety, of which the above mentioned is probably an example, the solid part of the stone beyond the septa is easily separated from the part which is subdivided by the septa. The separation is occasioned by a small quantity of ochre. Of this kind several specimens have been found in the parish of Kirkintilloch. Many of the ludi Helmontii have in their centre an elliptical *nucleus*, round which they were perhaps originally formed. Its dimensions bear a considerable proportion to the dimensions of the stone. The *nuclei* are not so thick as broad. They are generally of a dirty white colour, resembling burnt lime-stone, and are partly crystallized. They readily effervesce with acids, and greedily absorb water; after which a certain proportion of them falls down into powder. They are inseparable from the rest of the stone, and from them all the septa seem to proceed. In some specimens they seem to be composed of concentric lamellæ.

"It appears from various circumstances, that these septa or divisions were formed in the stratum of schistus or-

clay in which they are embedded. Various opinions have been given concerning the original cause of their peculiar construction; but it is more than probable that our knowledge of the manner in which these and many other fossils in the bowels of the earth were formed is too scanty to enable us to decide positively about many things concerning them. Several varieties of *ætites* or *eagle-stones*, another kind of irone-stone balls, are found in this country. These fossils are of a round or elliptical form, and consist of a *nucleus*, commonly argillaceous, surrounded with a covering of iron-stone. The name *ætites* is given them from a report that eagles put them in their nests to facilitate the hatching of their eggs. Superstition, which is ever inventive, taught for a certainty, that being worn by pregnant women they had great influence in rendering labour in child-birth easy and safe. They are divided, according to the state of the *nucleus*, into male, female, or neuter. Superstition ascribed, even to this fanciful division, certain extraordinary powers over, not only the chick *in ovo*, but also the human species. Mineralogy.

"Nodules of iron-stone irregularly shaped are to be met with almost everywhere. In some places they are found in regular strata, in others not. Some contain sea-shells, and are calcareous; others are destitute of shells, and are not affected by acids. They are known by different names, as kidney-stone, button-stone, &c. from their bearing a general resemblance to these bodies. Very few of them received their shape by attrition. They commonly contain the best of iron-stone. Fragments of an argillaceous iron-ore of a blood-red colour are found at Stonelaw, and some other places in Rutherglen. This variety is usually called *keel*, and is sometimes used as a crayon for drawing."

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Remarks on iron.

Iron is a metal of so much importance to mankind that the manufacture of it deserves special notice. Gold has been called the king of metals; and from its beauty, rarity, and indestructibility, it may be entitled to the appellation; but it has been found to be of little practical utility in ordinary life; because, even for the purpose of being used as current coin, a substitute may be successfully obtained for it. A guinea on the continent of Europe purchases about twice the quantity of human food and raiment that it does in England. Before it can enter into the latter country, it must lay aside half its value, and submit to be accounted of the same price with British paper; yet commerce finds no want of guineas in Britain when there is occasion for them. In all ages, also, it has happened that the possessors of iron have been extremely apt to acquire the mastery of those who abounded very greatly in gold. Iron is manufactured in this county by means of the three following substances, iron-stone, coal, and lime. The metal called *iron* is capable of being brought into a great variety of states, so as to be adapted to different purposes. Of these it is only necessary to take notice of three, which include all the rest. Pure iron is that which is used by the blacksmiths. It is tolerably soft, and capable of being bent in every direction, of being hammered out into thin plates, or drawn into wire. Its purity is in proportion to its softness and tenacity, both when hot and cold. It is incapable of being melted or reduced into a liquid state by any degree of artificial heat. Steel is iron incorporated with charcoal. To prepare steel, bars of soft iron are confined for several days in a close furnace or oven covered with powder of charcoal, whether made from wood or mineral coal; and the whole is kept at a strong heat. When taken out, the iron, having absorbed or united with a portion of the charcoal, is found to have acquired this important property,

Three sorts of iron.

that when heated and suddenly plunged into cold water, it acquires an extreme degree of hardness. When very fully impregnated with coal, it is capable of being melted. The third kind of iron is cast iron or pig-iron. Like steel it is impure and hard; but the impurity consists of its being united, not like steel, with pure coal merely, but with a variety of earthy and other matters. Cast iron may be broken, but cannot be bent, and is reducible into a liquid state by heat; in consequence of which property, and of its extreme hardness, it is conveniently used for being formed in moulds into vessels and parts of machinery. When iron is first produced from iron-stone or the natural ore, it is in the state of cast iron; for although attempts have been made to render it malleable at once, these have not yet been brought to great perfection, or come extensively into use. Cast iron is that sort which is manufactured in Clydesdale. Mineralogy.

It is uncertain at what period the manufacture of iron commenced in Britain. It is probable that the working of the tin mines in Cornwall by the Phenicians (Philistines) would introduce into the country a class of men skilled in all the metallic ores then known, capable of appreciating their true value, and of rendering the riches of an unexplored country subservient either to their own immediate wants, or to the conveniences of the unskilful inhabitants. The invasion of England by the Danes, and their consequent establishment, would most likely add to the former stock of knowledge in the art of mining and fusing ores. Large heaps of scoriæ are to this day met with in many places of England, with so great an accumulation of soil as to grow trees of a large size. These heaps are called *Danes cinders*, and are in our times smelted to advantage for the production of crude iron; a circumstance which proves that these early manufacturers possessed no great skill or dexterity. From History of the manufacture of iron.

Mineralogy.

whatever period the iron trade may date its origin, certain it is, that towards the end of the sixteenth, and early in the seventeenth centuries, we find that it had attained to a pitch of magnitude almost incredible, at a time so hostile to the peaceable views and industry of the manufacturer. Hence we find, that cannon and mortars of various calibres and constructions were fabricated from cast iron at some of the English works; and that this species of manufacture was in considerable request on the continent. The calibre or cavity of the guns was in these days, and within these forty-six years, formed by a loam core of the exact diameter wanted to contain the shot. This was placed vertically in the middle of the mould. The boring and turning mills were quite unknown, together with all that scrupulous exactitude which distinguishes the artillerist and the manufacturer of the present times.

Charcoal of wood formerly used.

Anciently charcoal formed from wood was universally used in Britain for the preparation of iron, and at present it is almost universally used upon the continent of Europe. So far down as the beginning of the late century, the fuel used in Britain in iron furnaces consisted chiefly of wood. The kinds of wood used for this purpose were various; but charcoal of hard wood, such as oak, birch, ash, &c. was always preferred to that made from pine, holly, sallow, &c. At the small remaining number of charcoal furnaces now in this country, the oak has still the undoubted preference. Its firmness and continuity enable it, while undergoing combustion in the blast-furnace, to support a more powerful stream of air, and to purify or extract the iron contained in a larger portion of ore, than charcoal made from softer wood. In the reign of James the Sixth no less than 300 blast-furnaces for preparing iron with charcoal are said to have existed in England,

and that they had fuel upon an average for forty weeks every year. They are likewise said to have produced from two to three tons of iron *per* day. Supposing them to have made only thirteen tons of iron *per* week, and that sixteen hundred weight of charcoal was requisite to produce a ton of iron, upwards of 14,000 acres of wood lands would be annually cleared to supply the iron manufacture. As the woods could not grow again in less than eighteen years, upwards of 250,000 acres of land must have been occupied in supplying the blast-furnaces. It appears, however, that the progress of agriculture under the peaceable reigns of Queen Elizabeth and James the First had greatly diminished the extent of the wood lands; and the consumption of wood for the iron works and increasing navy had exhausted the principal forests. Hence those individuals who still possessed woods, and were engaged in the manufacture of iron, found their profits augmented; but this circumstance, together with the growing scarcity of timber, induced individuals to attempt to substitute pit-coal for wood. Accordingly, in 1612, Simon Sturtevant, Esq. was favoured with a patent from King James for the exclusive manufacture of iron with pit-coal in all its branches for thirty-one years. In return, the said Simon Sturtevant bound himself to publish his discoveries, which afterwards appeared in quarto under the title of his *Metallica*. It is uncertain from what reasons, but Mr Sturtevant failed in the execution of his discoveries upon a large scale, and was obliged next year to render up his letters of monopoly.

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Attempts to use mineral coal.

The second adventurer in this line we find to have been John Ravenson, Esq. who, like Sturtevant, was successful in obtaining a patent for the new manufacture, but, like him also, was inadequate to the completion of it upon an extensive scale. Ravenson was also enjoined to publish

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his discoveries. Under the title of his *Metallica* they were printed for Thomas Thorp *anno* 1613. Several other adventurers stepped forth; all of whom had the mortification of resigning their patents without having contributed to the success of the arduous undertaking.

Dudley's patent.

In 1619, Dudley obtained his patent, and declared, that although he made only at the rate of three tons of pig-iron weekly, he made it with profit. The discovery was perfected at his father's works at Penpont in Worcestershire. This gentleman's success in the various manufactures of iron with pit-coal had united against him not only all the proprietors of the charcoal iron trade, but many new adventurers, who wished to share in the emoluments of the new discovery. Their interest was so powerful as to limit Dudley's patent from thirty-one to fourteen years. During the most of this period he continued to manufacture pig and bar iron, and various castings, all of which he sold much lower than the charcoal manufacturers. In casting vessels or machinery, he must have had a great advantage over the charcoal founderies, because cast iron made from charcoal is too pure, or approaches too nearly to soft iron, and hence flows less easily, and takes the form meant to be impressed upon it less accurately, than the more impure metal formed by means of mineral coal. The superior talents of Dudley were beheld with envy; a lawless combination was formed against him; and an assemblage of banditti destroyed his whole works. This is one of the evils which to this day are apt to resist the progress of improvement, or the introduction of new machinery into England, and which is a disgrace to the nation, considered as a community laying claim to a civilized character. The civil wars prevented for a time the progress of the arts of industry in England. From that period till the year 1740 nothing of importance was done

in the manufacture of pig-iron by means of pit-coal, cinders, or coke. The application of the steam-engine, for raising and compressing air, no longer confined the manufacturer to local situations where water-falls could be obtained. Larger furnaces, with a proportionate quantity of blast, were introduced. Among the first effects of these, from eight to ten tons of pig-iron were produced weekly. Ever since the application of the steam-engine to the production of a power-blast to excite the furnace fires, the weekly quantity of iron produced has in general been increasing. The produce depends so much upon the quantity of air used for reduction of the ore into metal, that this circumstance is now chiefly considered in the construction of iron works; and at some furnaces, the blowing machine is calculated to produce between forty and fifty tons of melting pig-iron *per* week at each furnace. At some iron works in Wales, where the sort called *oxygenated crude iron* is manufactured purposely for converting into bar-iron, there are several instances of a furnace producing seventy, seventy-one, and seventy-two tons of metal weekly. This astonishing quantity forms a most striking contrast with the early exertions of Dudley, who conceived three tons a profitable produce, and whose greatest exertions never exceeded seven tons of pig-iron weekly. Mineralogy.

No sooner had the consequences of the general diminution of wood, for the purpose of making charcoal, been felt by the individuals whose interest it was to support the manufacture of iron, than their violent prejudices were laid aside against the use of pit-coal; and this mineral combustible substance was brought forward, and established, as the basis of this profitable and useful manufacture. Pit-coal has hitherto been better known, and its usefulness made more subservient to the purposes of life

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and of manufacture, in Britain than in any other country. Pit-coal, in Scotland, so far as the manufacture of iron is concerned, consists of three sorts; splint-coal, free coal, and bituminous coal. The first is accounted the best; free coal is the medium state between splint and bituminous coal. Under the latter are arranged the lighter varieties, known by the names of candle-coal, parrot-coal, &c. These last have hitherto been accounted unfit for the manufacture of cast iron. It may be remarked, that in some places of England and Wales, coal is found of far superior quality for this manufacture to any known in Scotland. It has very little bitumen, and unites to the purity of splint-coal all the softness and combustibility of wood.

Preparation of coke or mineral charcoal.

Pit-coal is thus prepared for the furnace: An extensive level field is chosen, and divided into spaces long and narrow, or flat ridges of from nine to sixteen feet broad, and of a length equal to the length of the field, with a passage betwixt each ridge. Upon these oblong spaces or ridges, which are called *hearths*, large pieces of coal are placed inclining to each other. Great care is taken to place the sharpest angle of each piece of coal towards the ground, so that large interstices may be left for the admission and communication of air. The coals are piled to the height of from thirty to fifty inches, and from eighty to one hundred tons are usually placed upon a hearth; that is to say, a ridge of coal is formed of from nine to sixteen feet in breadth, of the height now specified, and of the length necessary to contain perhaps one hundred tons of coal. The field contains a variety of these ridges or hearths according to the extent of the work carried on. In building each fire, they reserve a number of vents reaching from top to bottom, into which the burning fuel is introduced. This is immediately covered by small pieces of coal beat hard into the aperture. These repress the kindling fire from as-

tending, and oblige it to seek a passage by creeping along the bottom, which is most exposed to air. In this progress the fire of each vent meets, and when united rise gradually, and burst forth on all sides at once. When the coal ceases to send forth smoke, that is, when all its volatile or bituminous matter is expelled, the combustion is understood to have proceeded a sufficient length; but if the coal contain pyrites, that is, sulphur and iron, a circumstance known from the golden metallic appearance of the crude coal, or from the suffocating vapour which it emits, the burning is allowed to continue a considerable time after the disappearance of the smoke, for the purpose of disengaging the sulphur. When the coal is accounted sufficiently purified from volatile matter, or brought to the state of a pure and light cinder, the fire is covered up with ashes, beginning at the foundation, and proceeding gradually to the top. The cinders or charcoal thus prepared are termed *cokes*. The length of time necessary to produce good cokes depends upon the nature of the coal to be coked, and the state of the weather. In fifty, sixty, or seventy hours, the fire is generally completely covered over with the ashes of char formerly made. The cokes, thus entirely secluded from air, soon cool, and in twelve or fourteen days may be drawn and wheeled to the furnace. The loss sustained in preparing coal for manufacturing iron is nearly as follows: 2240 pounds of different sorts of coal give the following products:

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	Coke produced.	Loss.
Free coal	700 lbs.	1540 lbs.
Splint and free coal mixed	840	1400
Splint slightly mixed	1000	1240
Pure splint	1100	1140

The great weight thus lost is carried off in smoke; and it is by collecting this smoke, by a process of distilla-

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tion, as formerly mentioned, that Lord Dundonald's coal tar is prepared. If a vessel filled with cold water is placed in the midst of one of these massy columns of vapour, before the fire has penetrated to the surface of the heap, a considerable quantity of tar will be formed upon its external surface. This will continue to increase till the water assume the temperature of the smoke, and no longer; because the substance called *heat*, having a tendency to distribute itself equally among all bodies, flies to the coldest, and unites with it, abandoning, in this case, the smoke which it was conveying towards the colder as well as the thinner regions of the atmosphere. When the water becomes hot, the heated smoke no longer tends towards it, but is carried towards a lighter and a colder region.

Iron-stone, how prepared for the furnace.

The next material requisite to the formation of cast iron is iron-stone. We have said that coal and iron-stone are usually deposited in the vicinity of each other in the bowels of the earth; and in working the one, it is often found convenient to bring forth the other also. When a good stratum of iron-stone is found of four inches in thickness, it is thought sufficient to defray the expence of working it. Iron-stone, as formerly mentioned, is mixed with a variety of substances; sometimes the iron ore is chiefly united with clay, sometimes chiefly with lime, and sometimes with mixtures of clay, lime, and sand. That mixed with clay is accounted the best. Those iron-stones in which sand very greatly abounds are thought the poorest of metal, or rather produce metal of the worst quality. To prepare iron-stone for the furnace, it must be roasted, or torrified, to expel all volatile matters naturally united with it. The mode of doing this consists in levelling a piece of ground, and covering it with a layer of small pit-coals. This is of various thickness, four, six, or eight inches, according to the height to which the pile is

to be built, and the nature of the iron-stone. Upon this stratum of coals the pieces of iron-stone are imbedded as near to the same size as possible, in order that all may be equally acted upon. These are reared to various heights, eighteen, twenty, to twenty-four inches; the determination of its height depending upon circumstances. The surface is a second time levelled, by introducing small pieces of iron-stone betwixt the interstices occasioned by the angles of the larger. This again receives a covering of small coals, seldom exceeding two inches in thickness. Upon this is reared the subsequent building, always gradually narrowing itself till it has assumed the shape of a stout wedge with its base resting upon the ground. After this is effected, the whole of the external surface receives a complete covering of the smallest sort of coal. The pile is kindled by applying burning coals to the ground-stratum. The fire creeps slowly along, heats the stone upwards, kindles the second layer of small coals, and ultimately inflames the whole mass from top to bottom. When the coals are consumed the pile gradually cools, and in eight or ten days may be wheeled away to the furnace. The quantity of iron-stone burnt at one time is various at different, and even at the same places. Some kinds require to be burned in smaller heaps, owing to their nature and fusibility. In some works the fire extends from fifty to sixty yards; and it is not uncommon to see skilful workmen at one end adding fresh materials to the burning pile, while others at the opposite end are employed wheeling away that which the fire has left sufficiently burned for the purpose of the furnace. Fires that extend from fifty to sixty feet in length, from ten to sixteen feet wide, and about five feet high, are most common.

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Limestones.

The third and last material used in the preparation of cast iron is lime-stone, after it has been thoroughly calcined by the ordinary process in a lime-kiln.

Blast-furnace described.

The furnace by which iron is extracted in a metallic state from these materials may be considered as consisting of two parts: The one consists of a steam-engine, which works a cast-iron cylinder, or cylinders, with pistons, which force a powerful blast of compressed air into the furnace, for the purpose of raising its contents to the highest possible degree of heat. The furnace itself is a stout square building, tapering slightly upwards, of from thirty-six to forty feet every way, and of from fifty to sixty feet in height. It is most conveniently placed at the foot of any steep bank, that access may easily be had to the top of it, by which the materials are thrown in. The cavity at the bottom, which is in the centre of the building, and is called the *hearth*, is only about two feet square. It gradually widens, and at the height of six feet and a half is two feet and a half square. Thereafter the cavity widens rapidly, so that at eight feet perpendicular height it is twelve feet diameter. From this height it gradually narrows to the top, which is at the height of about forty-five feet from the base; and here the cavity is about three feet diameter; and there is an opening on one side for filling in materials. The remainder of the height is a sort of chimney to conduct the flame aloft. The furnace is lined at the bottom with the best fire-stone that can be procured, and the body of the furnace is lined with a double building of bricks made of clay which becomes white in the fire, having a stratum, between the inner coats or linings of brick, of powdered cinders or charcoal. The blast of air is admitted into the furnace by a small tapered pipe of from two to three inches diameter: it enters the furnace at some distance

from the bottom, generally at the height of about two feet. At the lowest part of the furnace is a hole of about six inches square, which is closely filled up with sand when the furnace is working; but from time to time, when a considerable quantity of metal in a state of fusion is collected at the bottom of the furnace, the sand is removed, and by a sort of tapping the fluid metal is discharged. Mineralogy.

When a furnace is to begin to work, a fire is kindled within it by means of commoncoal, and in the space of about three weeks it is accounted sufficiently dry to admit of farther operations. Some loose burning coals being thrown upon the bottom of the furnace, a few baskets of cokes, that is, of cinders prepared in the way already mentioned, are introduced. As the furnace is left open at the bottom, while the whole height acts as a chimney, the draught of air is powerful, and the heat soon becomes great. In proportion as the first quantities of coke attain a red heat, more is added, till it is nearly full, requiring about 900 baskets of coals; each basket, when of the best sort, being about 110 pounds in weight. When the furnace is sufficiently heated throughout, specified quantities of cokes, iron-stone, and blast-furnace cinders, are added; these are called *charges*. The cokes are commonly filled in baskets, which at all the various iron-works are nearly of the same size. The weight of a basket, however, depends entirely upon the nature and quality of the coal; being from 70 to 112 lb. each. The iron-stone is filled into boxes, which, when moderately heaped, contain 66 lb. of torrified iron-stone. They often exceed this when the stone has been severely roasted. The first charges which a furnace receives contain but a small proportion of iron-stone to the weight of cokes; this is afterwards increased to a full burden, which is commonly 4 baskets cokes, 320 lb.; 2 boxes iron-stone, 112 lb.; 1 box blast-fur- Blast-furnace, how wrought.

Mineralogy.

nace cinders, 60 or 70 lb. At new works, where these cinders cannot be obtained, a similar quantity of limestone is used. The descent of the charge or burden is facilitated by opening the furnace below two or three times a-day, throwing out the cold cinders, and admitting, for an hour at a time, a body of fresh air. This operation is repeated till the approach of the iron-stone and cinder, which is always announced by a partial fusion, and the dropping of lava through some iron-bars introduced to support the incumbent materials. The filling above is regularly continued; and when the furnace at the top has acquired a considerable degree of heat, it is then judged time to introduce the blast. In two hours after blowing, a considerable quantity of liquid matter is formed, and gradually a quantity of iron, in a fluid state, fills the lowest part of the furnace. The furnace is then tapped, by opening the hole already mentioned; a channel is made in the sand, with lateral moulds on each side, into which the melted matter is allowed to run. The principal channel is called the *sow*, and the lateral moulds or channels are called *pigs*; and hence cast-iron receives the appellation of *pig-iron*. After the working is begun it is easily continued; the cokes, iron-stone, and lime-stone, are thrown in stratum above stratum, and cast-iron is the product; so that the business is successfully conducted by persons possessing very little experience or information. In general, what is called a *charge of the furnace* consists of the following ingredients: 5 baskets cokes, 400 lb.; 6 boxes iron-stone, 336 lb.; 1 box lime-stone, 100 lb. The tapping of a blast-furnace appears in description a merely mechanical or vulgar operation; but to a stranger it does not fail to prove sublime. The ear-piercing blast being intermitted, the furnace is opened by a number of persons, who obviously expose themselves to a severe degree of

heat. At length the melted metal flows out in a stream of fiery lava. The operation is never totally destitute of hazard; because, if any portion of the sand has been rendered wet in an improper degree, it is apt to explode, and to cast about the metal in a state of ardent ignition, to which a glass-house fire makes only a distant approach. Indeed, a work erected for the preparation of iron is at all times a striking object, but more especially when viewed in the night. Its vicinity exhibits a great field of fire and smoke; from the steam-engine the horrid clanking of chains proceeds; and the blast pierces the ear with a terrific sound, which is the reverse of all melody, being a mixture of hissing, grating, and screaming. In short, an iron-manufactory affords a night-scene truly infernal. Mineralogy.

The two great requisites to the production of a large quantity of iron are, a blast or torrent of air of great power thrown into the furnace by a steam-engine, and coal of the best quality. These do not fail to reduce speedily the iron-stone into a liquid state, and to extract whatever metal it contains. Still, however, charcoal of wood is far superior in value to that of mineral coal; but in the present state of Britain it cannot be obtained: nor is it to be wished that our best lands should be devoted to such a purpose, when they can be better employed in an improved agriculture, and when the bowels of the earth afford a valuable substitute, which in certain situations can be obtained in abundance, and which produces a sort of iron, not indeed the most easily reduced into the state of soft iron or steel, but the most valuable for being used for every purpose of machinery.—Undoubtedly the advantages derived from the trade in iron, whether manufactured with charcoal or with mineral coal, have been very great; whether we consider it as having cleared the country of vast tracts of wood, and produced the consequent improvement

Mineralogy. of climate, and the extension of agriculture; or as having placed us at the head of the manufacturing countries of Europe, as affording us at all times a plentiful supply for the construction of every species of machinery; as being an arsenal for rearing and protecting an extensive navy; or as having been a source of wealth to many individuals, and at the same time affording a competent recompence for the labour of a number of our fellow-creatures.

Lead-mines In the uppermost part of the county, that is, upon the mountains at its southern extremity adjoining to Nithsdale, are the well-known lead-mines belonging to the Earl of Hopeton, which we formerly mentioned when treating of Dumfriesshire. The elevation here is very great, as already mentioned; yet it is remarkable, that in the small gardens belonging to the miners, and adjoining to the manager's house, in consequence of the aid of abundance of manure, excellent crops of all sorts of vegetables are easily reared. The workmen at the mines are subdivided into pickmen, smelters, washers, and labourers, besides carpenters and smiths. The payment of the pickmen depends upon the quantity of lead found. Five or six of them join, and take what they call a bargain; and according as it proves more or less productive of lead, their wages are higher or lower. The rest of the workmen receive fixed wages. The work is carried on by two different companies. As this place is far distant from the cultivated parts of the country, oatmeal and barley are purchased by the overseers of the mining companies, and reserved in stores, out of which all the individuals employed by the respective companies receive weekly a certain quantity for their families; and this makes part of their pay. It is to be observed, that the common people employed in the mines here bear little resemblance to their brethren in other quarters. They are of a sober and

intelligent character. They work in the mines only six hours out of twenty-four; they have therefore much leisure, and they employ a considerable portion of it in reading. They have been at the expence of fitting up a public library, towards which they all contribute for the purpose of purchasing books. They have also a good school. The library was originally established by an overseer named Mr Stirling, who prevailed with the workmen to unite for that purpose. Previous to the existence of the library, the miners here were in no degree superior to ordinary colliers; but a taste for literature speedily produced its ordinary concomitants, decency, industry, and sobriety of manners, pride of spirit, and a desire to give a good education to their children. Similar effects have also been produced by a library at the neghbouring mines of Wanlockhead. The produce of the mines in Crawford parish has been known to vary from 10,000 to 18,000 bars, of from 112 to 120 lb. each. The sale has also been very various. After the commencement of the war of the French revolution, the demand failed in such a degree, that lead worth nearly L. 40,000 remained a considerable time deposited at Biggar, which is nearly half way to Leith, to avoid the expence of farther carriage. Nearly an equal quantity was accumulated at Leith; but the state of the market afterwards altered so much, that the commodity rose to nearly double price. Some idea will be obtained of the value of the minerals of this county, when it is remarked, that the coal, iron, lead, and lime of Lanarkshire, are computed to produce an annual revenue amounting to nearly double the sum drawn from the rent of the lands employed in agriculture, pasturage, or in rearing fruit or forest trees; yet in the Upper Ward the arable and meadow lands are considered as extending to nearly 56,500 acres, the muir pasture to 185,000 acres, and the

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Effects of literature on common people.

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woods to upwards of 3000 acres. In the Middle Ward the arable territory amounts to nearly 70,000 acres, the pasture to 66,000 acres, and the woods to considerably above 4000 acres. In the Lower Ward the arable territory amounts to upwards of 33,800 acres, and the woods to about 1000 acres.

As in giving the above very concise account of the most valuable minerals found in this county, we have said that different districts rest upon different beds or strata of minerals, it may be necessary, to avoid ascribing an uniformity to Nature which she does not follow, to remark, that as lead is found in the highest part of the county, and consequently upon the summit of the great masses of whin-stone; so likewise, in Crawford-John parish, in the same high county, on Gelkerscleugh estate, there is a good lime-stone quarry, with abundance of white free-stone. On the southern side of the Clyde, as already noticed, coal is found at Douglas; and on the northern side it is found near the Midwain, to the southward of Carnwath, though only the uppermost and least valuable stratum has hitherto been wrought. These may be considered as encroachments made by what are called the coal-metals upon the whin-stone district.

Mineral strata.

As an object of some curiosity, we shall here insert a table of the mineral strata as found in the parish of Rutherglen, at Stonelaw, from the treatise already quoted:

	Feet.	Inches.
Earth and clay - - -	12	8
Free-stone, *white argillaceous*, - -	20	—
Till, *with plies*, - - - -	18	6
Till, *with vegetable impressions*, - -	16	—
Doggar, *coarse iron-stone* - - -	—	6
	67	3

	Feet.	Inches.	Mineralogy.
Brought forward	67	3	
Coal, *soft*,	4	6	
Till, *with plies*	6	—	
Free-stone, *extremely hard*,	24	—	
Coal, *soft*,	1	—	
Till, *with some seams of iron-stone*,	62	—	
Coal, *soft*,	5	—	
Till,	20	—	
Marble, *full of bivalve shells*,	1	6	
Till,	8	—	
Free-stone, *white, very hard*,	2	8	
Till, *with iron-stone*	32	—	
Coal, *soft*,	6	—	
Till, *with a stratum of free-stone*,	47	6	
Doggar,	—	8	
Coal, *soft*,	3	—	
Till, *with vegetable impressions*,	10	—	
Free-stone,	6	—	
Till, *with bivalve shells*,	14	—	
Iron-stone, *two strata*,	—	10	
Coal, *hard, good for iron-work and forges, &c.*	3	6	
Coal, *soft*,	1	6	
Till, thin seams of coal, free-stone, and iron-stone, *penetrated by boring*	84	—	
	413	8	

This arrangement is not invariably the same. The stratum of marble, for example, is in some places no more than an inch or two in thickness, and in others it is entirely lost. The thickness of the seams of free-stone varies considerably. The coal itself is, in this respect, liable to exceptions. The strata are frequently deranged by troubles or dikes, of which three large ones run in a

Mineralogy.

direction east and west, and at pretty regular distances from each other. They are intersected by smaller ones, running generally from south to north. The derangement is so great at one place in Stonelaw, that the hard coal, at the depth of about fifty fathoms, on the north of the dike, is in the space of a few yards raised to near the surface. Owing to these troubles, the dip of the metals is various, from one foot in six to one in eighteen.

Less important minerals.

Besides the more important fossils already mentioned, objects of curiosity to the mineralogist are found in abundance in this county, either from the singular and unusual mixture of minerals, or from the rarity of the productions. Thus the Osmund stone, formerly mentioned, is found in great quantities. Clay is found of a vast variety of qualities. Fire-clay also, or that which becomes white under calcination, and is not liable to fusion by intense heat, has been found at the Wilsinton iron-works, at the Omoa iron-works, at Torrence and Stonelaw, and in a variety of other situations. It is sometimes found replete with shells and other apparent fossils of the ocean, or mixed with the matter of coal, so as to burn for a short time with a clear flame till it is reduced to hard white ashes. It is sometimes black and slaty, and at other times formed by Nature into the shape of cones. Specimens have also been discovered of what is called *zeolite*, which possesses the curious property of forming a jelly with acids. Small specimens of what are called *soft clays* have likewise been found. Great variety of lime-stone has likewise been discovered and wrought. Thus, around Cambuslang, a kind of marble has been found, which now receives its denomination from the parish; it is from six to twelve inches thick. Like the coal it has its dip towards Clyde; and wherever coal-pits have been sunk, it has been found in that neighbourhood. It is

of a dark brown colour, beautifully variegated with white, and takes a good polish. Near Rutherglen, where it is called *Cambuslang marble*, and where it is from a few inches to two feet in thickness, it lies in a stratum of till or clay above the main coal, and is brought up to be used at the marble-works at Glasgow. Mineralogy.

In a country abounding with lime-stone, petrifactions of all sorts must be numerous. They have been found in vast abundance on the banks of the Calder. It is observed by Mr Ure, that they were in 1787 in great perfection at Patteshall, then the property of the late John Miller of Millheugh, Esq. professor of law in the university of Glasgow. A large space was covered with moss, which on the surface retained a beautiful verdure, but about an inch or two below exhibited the various degrees of petrefaction from the slightest adhesion of the calcareous matter till the vegetable was thoroughly replete with it. The whole was at the depth of about six inches a mass of stony hardness. The stem and branches of the same plant, although in perfect vegetation near the top, could be traced a considerable way downward. The petrifaction is not of that kind which consists of an incrustation only, but the whole of the plant is replete with the petrifying substance. Whilst this curious operation of Nature was going on, and inviting the diligent investigators of the works of God to this pleasant though retired spot, the impending bank gave way, and buried the petrifactions under huge masses of stone, with the earth and shrubs that were above the rock. Instead of affording an agreeable retirement, where many of the genuine beauties of Nature were to be seen, the place now exhibits a scene of wild desolation. Sixty or seventy years will perhaps be insufficient for producing a group of petrified mosses equal to the former. From every appearance, it is evident that Petrifactions.

Mineralogy.

Gillburnsynke, a considerable number of years ago, underwent a fate in some respects similar. On the face of the rock, over which the petrifying water runs, and which is about thirty feet high, large masses of petrifactions had in a long series of years been formed; but the weight had at length accumulated to such a degree, that they brought away part of the rock to which they adhered, and fell into the glen below, where they now lie. This operation of Nature is on the face of the rock again going forwards, and large pieces of petrified mosses are now making their appearance.

It has been remarked, that of all the sorts of vegetables liable to petrifaction, or to become concreted into stone by the depositation of lime in their substance, this event occurs by far the most frequently and most completely to mosses. This may occur partly in consequence of their being enabled by their texture to retain moisture much more obstinately than is done by other plants, whereby water saturated with lime is made to remain longer in contact with them than with other vegetables. Perhaps also the change may be facilitated by the nature of moss-plants, which have a powerful chemical affinity towards lime, or a strong tendency to unite with it. It is this affinity, or the tendency of the moss-plant to unite with lime, which renders that mineral so valuable as a manure in destroying moss as a living vegetable, and converting its substance into a fertile soil, or rather into a mass of manure for the soil.

Whinstone.

The whin-stone found in this county is of various qualities. Besides the hard sort, much is to be found of what is commonly called *rotten whin*; because, when exposed to the weather, it cracks and falls down into small pieces, and is reduced to clay or mud. Of this kind many hills in Scotland are composed. They generally, however,

contain great numbers of roundish pieces of hard whin-stone that resist the action of heat, air, and water. These are usually enclosed within concentric lamellæ, or thin plates of rotten whin, that are easily decomposed. These balls often freely emit fire when struck with steel, which the rest of the rock very sparingly does. Most of the loose hard stones found on the fields consist of those pieces of hard whin-stone which have resisted the action of the atmosphere, when the rest of the rock of which they formed a part fell down, and was converted into mould of a more or less degree of softness of texture. Mineralogy.

Basaltic columns have been found near Rutherglen. A colonnade, consisting of 164 pillars, was by workmen procuring materials for a turnpike-road brought into view. They are about thirty feet high, and a foot and a half in diameter. They are mostly five-sided, but the sides are not equal. A thin *dissepimentum* (dividing substance), some parts of which are ochreous, and others argillaceous, separates them from one another. Not a few specimens of it are very hard, approaching to a vitreous and metallic texture; whilst others are loose and friable between the fingers. It is generally of a reddish colour, and becomes darker and magnetic by torrefaction. Some of it is porous, having some of the cavities filled with a sooty-like substance, among which are found transparent rock-crystals of hexahedral pyramids. In the columns the transverse subdivisions are very imperfect; in some instances they exhibit a convex and a corresponding concave surface. This basaltic stone is considerably brittle, does not emit fire with steel, is not acted upon by acids, and is generally of a darkish gray colour. It affects the magnetic needle; a proof that it is not destitute of iron. After being heated in the fire it becomes darker in the colour, and grows so hard as to strike fire with steel. The Basaltic columns.

Antiquities. flame of a blowpipe readily melts it into a black glass. The columns, some of which are a little curved, incline to the south at an angle of about 75 degrees. In the west side of the rock the pillars gradually coalesce into one another at their bases till they become a solid mass.

Roman road. The remains of antiquity which still exist in this county are not, considering its extent, very considerable. We formerly traced two Roman roads, passing through Annandale, and uniting into one at the upper extremity of this county. It descends by Lamington and Biggar, along the south-east side of the Clyde; but few or no vestiges of it exist, excepting about half a mile to the westward of Biggar, where it is still to be seen passing through a bog called the Westraw moss; and here it still forms a part of the high road between Edinburgh and Leadhills. It appears to have proceeded down the Clyde; some remains of it, which will be immediately noticed, are to be seen in the parishes of Carstairs and Lanark, and afterwards in the low country near Bothwell.

Crawford. In the uppermost parts of the county, in the parish of Crawford, indications still exist of the ancient turbulent state of the country. Many houses on Crawford moor were formerly stone-vaults, some of which remain there, and are still pointed out as the strongholds where the inhabitants preserved themselves and their property at the time when the Douglasses of Clydesdale and the Jardines and Johnstons of Annandale were carrying on their hostilities and depredations. There are hills in the same parish, called *watches*, where persons sat in order to give notice on the first approach of an enemy. These notices were communicated almost instantaneously from the head of the parish to the lower end, by smoke in the day, and flame in the night.

Opposite to the house of Gilkerscleugh, which is in

the parish of Crawford-John, on the top of Netherton hill, are to be seen the remains of an old fortification, consisting of two circular ridges of stones, the one within the other. The diameter of the inner circle is 135 feet, and it is distant about 30 feet from the outer circle. In the same neighbourhood are the remains of some old castles, about the owners of which history and tradition are equally silent. Descending the Clyde, at Coldchapel are to be seen the remains of a Roman station. Upon the military road, and in the same neighbourhood, is a spot called *Wallace's camp*. In the same parish are the remains of a fortress or tower which belonged to the family of Baillie of Lamington, the heiress of which house is said to have been married to the celebrated Sir William Wallace. It is said that they still preserve at Bonnington, near Lanark, an ancient chair, which is remarkably broad and stout, and which tradition represents as having been sat in by this celebrated Scottish hero. Near the tower at Lamington the Clyde is deep, and tradition still points out a pool into which a laird of Lamington and his vassals, after an engagement, forced a party of the Annandale Johnstons who had come to plunder his lands. The most remarkable object in this neighbourhood is the mountain called *Tintoc* or *Tinto*, signifying, as already mentioned, *the hill of fire*, probably from being used as a beacon to alarm the country in case of hostile invasion. It is well calculated for this purpose, as it is seen to an immense distance, and even far beyond Glasgow. Upon the summit of it is a great cairn or collection of stones; to convey which thither must have been a work of enormous labour. Antiquities.

At the western part of the village of Biggar is a large artificial mound of earth; it stands beside a steep declivity. Whether any ditch or other works surrounded

Antiquities. the remaining parts of it cannot now be known, as the vicinity has long been converted into garden-ground. From this mound, or moat as it is called, two others can easily be seen in different directions at the distance of two or three miles.

Church of Biggar. The church here is a large and venerable building, which overlooks the village. The most ancient record concerning it represents it as founded in the year 1545 by Malcolm Lord Fleeming, Lord High Chancellor of Scotland, and ancestor to the Earls of Wigton. It was dedicated to the Virgin Mary, and endowed for a provost, eight prebendaries, and four singing boys, and six poor men. "The founder intending it for the burial-place of himself and family, reserved (says Douglas in his Peerage) the presentation and patronage thereof to himself and successors forever."

This foundation was first confirmed by Cardinal Beaton Archbishop of St Andrews, and afterwards by the Pope's bulls. Robert Stuart, natural son of King James the Fifth, abbot of Holyroodhouse at Edinburgh, and afterwards Earl of Orkney, gave to this college, with the consent of the chapter of his monastery, and at the requisition of James Lord Fleeming, son of the founder, his relation, the perpetual right of patronage of the parish-church of Dunrod, in the diocese of Withorn, on the 5th of the month of May, in the year 1555. In his disposition, Mr John Stevenson, apostolical prothonotary precentor of the metropolitan church of Glasgow, vicar of the said parochial church of Dunrod, is styled the first provost of the blessed Mary of Biggar.

This church is a very handsome building; like all the other great churches erected in times of popery, it is in the form of a cross, of which the centre and the wings are of hewn stone. The remainder is of ordinary ruble work, that is, of ordinary stone and lime. The centre is formed

by four extremely lofty Gothic arches, which support a large tower open at top, with a flooring covered with lead. The whole has the appearance of being much older than the date already mentioned. It might possibly have been in existence as a parish-church at the time when it was raised by the Fleemings to the dignity of a collegiate church. At the same time, there is a tradition in the neighbourhood that it was built by a nobleman named Malcolm Lord Fleeming, which corresponds with what has been already stated. Here, as was before observed, is the cemetry of the Earls of Wigton; and as that family ended in an heiress, who died lately, and who had married Lord Elphinston, this last family has acquired the rights of the Earls of Wigton. Here is preserved an ancient vase, supposed to be Roman. In the days of popery it was appropriated to sacred offices; and it is now used to contain the water when the sacrament of baptism is administered. In the wall near the principal door of the church is to be seen the instrument called the *jougs*. It consists of two semicircular pieces of iron, with an opening intended to receive a padlock at their junction in front. It was used as an iron collar; and penitents were anciently fixed here, during the celebration of divine servic, as an ecclesiastical penance. Antiquities.

Within view of the church, at the distance of almost a mile, in the midst of a marsh, is the castle of Boghall, which in all probability received its name from its situation. The attempts made to drain the neighbouring bog have probably rendered it more accessible than it was in former times, as the only solid land near it appears to have been at some distance in front, and with that it was connected by an artificial mound or causeway. It consists of a stone-wall of considerable height, flanked with towers, encompassing an extensive area which is now cultivated. Boghall castle.

Antiquities. The entrance was through a magnificent and strong gate, According to tradition, an extensive and lofty building once stood in the centre of the whole, where a corn-crop is now sometimes reaped. The only house, however (if we except the towers), which now exists is in the southern or back part, near the most inaccessible quarter of the morass or bog in which the whole is situated. This house, which is evidently more modern than the surrounding wall or towers, has on it the date 1670. Upon the front of the staircase are the arms of the Earls of Wigton quartered with those of Primrose.

This place formerly belonged to the Fleemings, Earls of Wigton, a family of great antiquity. They acquired the lands and barony of Biggar by the marriage of Sir Patrick Fleeming with one of the daughters and co-heiresses of the brave Sir Simon Fraser of Oliver Castle. This Sir Patrick was the second son of Sir Robert Fleeming, who died A. D. 1314, and like him was a faithful friend to King Robert Bruce. In the year 1451 Sir Robert Fleeming obtained a charter from King James the Second, erecting the town of Biggar into a free borough of barony, and by the same was created a lord of parliament, by the title of Lord Fleeming of Cumbernauld. The next year, Malcolm Fleeming, nephew to the above named Lord, procured a grant under the great seal of the lands and barony of Boghall, Haddlestane, &c. dated the 15th June. Douglas, who in his Peerage mentions this circumstance, does not say who were the former proprietors of these lands.

This fortress, upon the whole, has evidently been one of the most extensive and magnificent in the south of Scotland; but in consequence, not of the irresistible effect of time, but of its affording so many materials for building, it is gradually ceasing to exist, by large quantities of its stones being carried off.

Antiquities.

Battle of Biggar.

In the popular histories of Sir William Wallace, Biggar is represented as the scene of a sanguinary conflict between an English royal army, no less than 60,000 strong, and the Scots under Sir William Wallace. Wallace and his men are represented as having passed the preceding night on the neighbouring mountain of Tintoc, and Wallace is said to have gone personally, like the heroes of antiquity, as a spy, in the disguise of a piper or minstrel, to view the English camp, in which, in that humble capacity, he endured various insults, which, according to the story, were amply avenged on the succeeding day. Various great stones on hills in this neighbourhood receive the appellation of *Wallace's chair* or *Wallace's seat.*

In some of the neighbouring parishes, to the northward, such as Libberton, Walstane, &c. are still to be seen the remains of some vaults similar to those in Crawford moor. They are said to have been once very numerous, and were undoubtedly intended for the protection of cattle, &c. The state of the times required this precaution; for when the families of Douglas and Buccleugh were wardens of the south marches, they allowed their retainers constantly to commit depredations on the inhabitants of this part of the country, destroying their grain, carrying off their cattle, &c.; so that, upon a signal given, the whole villagers (having all one interest) were under the necessity of turning out to combat their spoilers. As an asylum for their cattle, they erected these vaults; before the door of which they always built a high wall, and on the top of it stationed men, with a quantity of large stones, which they threw down upon the enemy when they attempted to get at the cattle by breaking open the doors. Many of these vaults and walls were to be seen entire some years ago in this neighbourhood.

Antiquities. Cuthally castle.

In the parish of Carnwath, on a narrow point of land that juts out into a moss, are the ruins of the castle of Cuthally, the seat of the ancient family of Somervile, ancestors of Lord Somervile, who settled in this country about the middle of the 12th century. This family were at one period by far the most powerful and opulent in the Upper Ward of Clydesdale. Sir John Somervile of Carnwath and Linton was a steady adherent of Robert Bruce in the sanguinary contest which he maintained for the crown of Scotland. Sir Thomas Somervile was pitched upon, after the battle of Durham, as one of the sureties for the ransom of King David the Second. Their castle here has once been a place of great strength, surrounded by an exceeding deep ditch and a large earthen mound, with an entry by a drawbridge on the west. One tradition says that it got the name of Cuthally (which signifies a warm sheltered walk or avenue), because the castle all the way to the village of Carnwath was bordered on each side by full grown oaks; and what seems to give weight and confirmation to this tradition is, that when this moss is dug to the bottom large oaks are often found, some of them in a surprising state of preservation, considering the amazing depth at which they now lie. Besides oaks there are also Scotch firs, birches, alder, hazel, &c. found at the bottom; some of the nuts appear entire till handled, but the slightest touch breaks them to pieces. By a different tradition, it is said that Gilbert, the eighth Lord Somervile, being vain enough to entertain for many weeks James the Fifth with his court at his castle of Cauthally, reduced himself so much, by these and other extravagancies, that he was obliged to sell the whole estate to the Lords Marr and Buchan, and betook himself to the lands of Drum in Lothian, which it appears were the patrimony of his eldest son's wife. The castle is at present

called *Cowdaily*; and that name is said to have been bestowed upon it in consequence of the extravagancies of its last lord of the name of Somervile, who had every day at his table a bullock dressed entire. The Lords Marr and Buchan possessed it for near a century. It does not appear, however, that they made any improvements on either the lands or villages; but there is reason to believe that Lord Marr passed a considerable part of his time in Liberton; for there is still to be seen, within 300 yards of the present church, the vestige of an old house called *Marr's walls* (probably those of a hunting house); and many other parts of the lands about that village are called to this day *Marr's braes, Marr's dike*, &c. The common people even point out the place where the horses were washed and watered. It stands at the distance of about 300 yards from the house. About the beginning of the seventeenth century this great estate was sold to Lord Dalziel, afterwards Earl of Carnwath, who possessed it down to 1676, when it was purchased by President Lockhart at a very easy rate. Antiquities.

In the parish of Covington, on the southern side of the Clyde, are four ancient enclosures or fortresses of a circular form, surrounded with one or more deep ditches. In the same neighbourhood, on a hill called *Wall brae*, is a cairn or heap of stones of 187 yards in circumference. On a round hill at the foot of Tintoc is a circle formed of great stone-pillars, erected close to each other; and at the distance of ten yards is a similar enclosure. Here also is a large artificial mount. The adjacent farm is called the *Sheriff-flats*; a name which gives countenance to the supposition that at this spot the sheriff was accustomed to hold courts to administer justice. According to immemorial tradition, a bullock's hide full of gold lies buried in this place; but nobody has yet been sufficiently industrious to

Antiquities. dig it up. Covington was formerly the seat of a family named *Lindsay*. A castle was built here, which was finished in 1442. The walls of the ruin are ten feet thick. A single-handed old sword having been found here has been honoured with the appellation of *Wallace's sword*.

Old fortress. In the confines of the parish of Pittenain, on the south, upon high ground, the vestiges of a large camp or fortification are still very visible. It contains about six acres, which form an irregular figure approaching to that of a circular area. The wall seems to have been very thick and high, and to have been composed chiefly of coarse stones; many of them a kind of flag, collected probably from the adjoining grounds; but there is no appearance of mortar or cement. It is situated upon the side of a deep moss, within which at a little distance are the remains of a small fort, scarcely including a rood of ground, which has evidently been connected with the large one by a passage made through the moss. The figure of this small fortification is likewise round, and the wall of it has been built with the same kind of stones. The large camp includes several springs of excellent water. Some urns were found under the ruins of the wall a great many years ago by some people who were digging out the larger stones for the purpose of building. Each of them was enclosed within four flag-stones set on edge and covered with one laid flat. In a house now in ruins, at a place called the *Clowburn*, in this parish, the first tea that was drank in this part of the country is said to have been used during the century before last. It had been brought from Holland, according to the tradition, by Sir Andrew Kennedy, who was then proprietor of that part of the parish, and who, holding the office of conservator of the Scottish privileges at Campvere in Zealand, had received it as a present from the Dutch East India Company.

At Douglas we find little to mark the ancient grandeur of the most powerful of the Scottish chieftains. The old castle of Douglas was burnt by accident about forty or fifty years ago. The late duke in his lifetime built one wing of a new castle of very strong and elegant work, in which there are between fifty and sixty fire-rooms. This wing was finished by Lord Douglas; but it still wants a front and another wing to complete the plan. The dining-room is a most elegant one, being forty feet and a half long, twenty-five feet broad, and eighteen feet high. There is also a beautiful hanging stair, which is much admired. There is here a row of very aged ash-trees, which tradition says were used in very barbarous times by the lords of the castle for hanging their enemies. The old church here was called *St Bride's*. A part of it is still kept in repair, on account of the ancient monuments in it, and the burying vault. In this old church and vault the chiefs of the family of Douglas for many generations appear to have been buried. Among the rest is a duke of Touraine, with this Latin inscription on his monument: *Hic jacet Archibaldus Douglas, Dux de Touraniæ, Comes de Douglas et Longoville, Dominus Gallovidiæ, Wigtoniæ, et Annandiæ, locum tenens Regis Scotiæ. Obiit 26to Die Mensis Junii* 1438. The last Duke and Duchess of Douglas and Lady Lucy Douglas are buried in a vault in the new church. Antiquities, Douglas.

The remains of a Roman camp are to be seen on the south side of the parish of Carstairs, on a rising ground near the Clyde. The camp itself is an exact square of six acres; and notwithstanding the attempts of the plough and spade to destroy the works of that great people, the prætorium is still visible, and the walls of circumvallation pretty entire. The causeway leading to the camp and from it is in a direct line, and can be traced several miles. Roman camp.

Antiquities. Pots and dishes of different sizes, and instruments of war and sacrifice, have been lately discovered. Coins of various kinds and different value have been dug up, bearing the inscription of M. Aurelius, M. Antoninus, &c. A few miles to the northward of this, the remains of a Roman station are still evident in one of the parks to the eastward of Cleghorn house. The station or camp at Cleghorn, General Roy thinks, was the work of Agricola. It measures 600 yards in length by 420 in breadth, capable of containing two Roman legions on the Polybian establishment, or 10,600 men; or it would hold one legion with its auxiliaries on a much higher establishment. Near the south-west angle of this camp there is a small port or redoubt, that seems either to have joined to the camp itself, or to have been connected with it by means of a line. In Lanark moor, to the southward of Cleghorn, was an exploratory camp of the Romans. The Roman road, by the camp in the parish of Carstairs, appears to have run through part of Lanark moor. From thence it passes Mouss water on the eastward of Cleghorn bridge, through the enclosures of Cleghorn, leaving Agricola's camp on the right, and so on by Colly-law, Killkadzow, Coldstream, and Yuel Shields, to Balstane near Carluke, bearing the name of Watlingstreet, or rather Biggar road. It proceeds, as formerly mentioned, along the neighbourhood of the Clyde, towards the great Roman wall that fortified the isthmus betwixt the waters on the opposite sides of the island.

Old caverns. Among the rocks and precipices of this rugged, but beautiful part of the country, are to be seen the remains of hiding places, evidently formed by a sort of rude art, but resembling more the holes of foxes than the retreats or strongholds of human beings. Thus about a mile north of Lanark, on the very brink of Cartlane craigs, on the north of the Mouss, are the vestiges of one old strong-

hold. On the land-side there are traces of a double ditch, which encloses about half a rood of ground; and on the side next the river is a precipice of more than 200 feet of perpendicular height. There are no traces of building excepting some artificial caves or covered ways. One of these, which was purposely opened, was found to be about seven or eight feet in length, and four feet wide, running in a bending direction towards the centre of the enclosure from the brink of the rock; the height about three feet and a half. The covered way was composed of huge blocks of free-stone, rude and unpolished, intermixed with the common moor-stone of the country. It was not arched at the top, but the stones laid horizontally one above another, still approaching nearer and nearer, till the sides formed a junction and united at the top. In the bottom of the covered way was a fat black earth intermixed with some bones in the state of ashes. Several other covered ways or holes, like the above, running in different directions, still exist, altho' not hitherto explored. The most remarkable thing attending these vestiges is, that no lime or mortar, nor the smallest appearance of lime-rubbish, is to be found among the ruins. A suspicion has therefore been entertained, that they must have been erected before the Romans had introduced the use of mortar. Near the fall of Stonebyres, on the opposite side of the Clyde, similar covered ways have been discovered, in which were found two querns, or hand-mills for grinding corn, among deers horns and bones of animals. Ancient writers do no doubt describe the Scots and Picts as issuing out of narrow holes and little caverns, like rabbits or worms; and it is possible, as such works have been found in various parts of the country, that these may have been used as temporary hiding places by the natives when their wooden huts were set on fire by an enemy. In

Antiquities.

Antiquities. the same neighbourhood, in the parish of Carluke, and indeed in most quarters here upon the Clyde, and the precipitous banks of the waters which fall into it, are to be seen the remains of strong towers, which here, as in other parts of the country, were the residence of the proprietors of the district; but nothing remarkable is now known concerning any of them.

The Lee penny. At the distance of two miles below Lanark is the house of Lee, the seat of Lockhart M'Donald, Esq. the representative of a very ancient family. Here is kept what is called the *Lee penny*, far famed for its medicinal virtues; some particulars in the history of which it may not be improper to mention. It is a stone of dark red colour set in a shilling of Edward the First, and has been in the possession of the family since the year 1320; that is, a little after the death of Robert Bruce.

That monarch having ordered his heart to be carried to the Holy Land, and buried there, the chief of the family of Douglas, after the death of the king, undertook the task of conveying it thither. The person, however, that carried the heart was Simon Locard of Lee, who accompanied Douglas, and who, from this circumstance, changed his name to *Lockheart* or *Lockhart*, and got a heart within a lock for part of his arms, with the motto, *Corde serrata pando*. Having taken prisoner a Saracen prince, his wife came to pay the ransom; and in counting out the money or jewels, this stone fell out of her purse, which she hastily snatched up. This exciting the curiosity of Lockhart, he insisted, that without its being given him, the captive chief should not be relieved. Finding Lockhart determined, she at last consented, yielded up the stone, and told him many of its virtues: *viz.* that it cured all diseases in cattle, and the bite of a mad dog both in man and beast. Many are the cures which are

said to have been performed by it; and people used to come from all parts of Scotland, and even as far in England as Yorkshire, to get the water in which the stone had been dipped. It is said that when the plague was last at Newcastle, the inhabitants sent for the Lee penny, and gave a bond for a large sum in trust for the loan; and so confident were they of its supposed virtues, that they offered to pay the money and keep the penny, which, however, the proprietor refused. The most remarkable cure said to be performed upon any person was the restoring to health Lady Baird of Sauchtonhall near Edinburgh, who having been bit by a mad dog had all the alarming symptoms of the hydrophobia. The loan of this famous penny having been asked, it was sent and used for a few weeks; the lady daily drinking and bathing in the water it was dipped in till she recovered. This happened ninety years ago; but the circumstance is very well attested. It undoubtedly confirms the ancient saying, that imagination kills and cures. The stone was always used by dipping it in water, which was given to the diseased persons or cattle to drink, and the wound or sore was also washed with the water. Antiquities.

The mills of Mauldsley upon Clyde appear to have been numerous. They were in ancient times of much consequence before that important engine, the water-mill, existed in every part of the country. There was formerly a wooden bridge (the vestiges of which are yet visible) fitted up in the rocks at Milton, to make the communication to these mills easier from the south and west on the opposite side of the Clyde; and farmers on the east, at the distance of about seven miles, were bound by charters to grind their grain at the mills of Mauldslie. It appears also that King Robert Bruce was proprietor of these mills; for it is recorded that he granted ten merks Mills of Mauldsley.

Antiquities. Sterling out of his mills of Maldslay (so it was then written) for the purpose of keeping a lamp continually burning upon the tomb of St Machute at Lesmahago.

Lesmahago priory. This St Machute is said to have been a bishop and confessor of the sixth century. There existed at Lesmahago a priory dependent on the abbey at Kelso; but all that remains of this ancient building is a square tower with battlements upon the tops of the walls. It is now covered with a pavilion roof, having a belfray on the top, and serves for the steeple of the present church, which stands adjoining to it. This monastery was founded by King David the First in the year 1140. The church belonging to it was dedicated to St Mary. This church, which appears by the marks of the beams in the wall of the tower to have been much loftier than the present one, has been twice destroyed by fire: first by John Plantagenet, brother to Edward the Third, king of England; and a second time at the reformation, when all the ancient monuments and relics were destroyed by the reformers.

Avondale castle. The ruins of the castle of Avondale stand upon a rocky eminence at the town of Strathaven, over a small water called *Pomilion*, which falls into the Avon about a mile below. It was surrounded by a strong wall with turrets at certain distances, and the entrance was secured by a drawbridge. This and the castle of Arran were alternately the residence of Ann Duchess of Hamilton during the usurpation of Oliver Cromwell. This lady did not die till the year 1716, after which the castle of Avondale was no longer kept in repair.

Drumclog. In this neighbourhood is a place called *Drumclog*, amidst boggy ground, celebrated for a rencounter between the covenanters and a party of dragoons under Graham of Claverhouse. On Sunday the 1st of June 1679, the covenanters had assembled for divine service at Drumclog to the number of about 300

men. That they might not be surprised by a sudden attack, they had placed a watch on Loudon hill, a remarkable eminence about a mile distant, commanding a view of the whole country. Captain Graham of Claverhouse, afterwards Viscount of Dundee, being apprised of the meeting, marched the morning of the same day from Hamilton with his cavalry. They were spied by the watch shortly after they passed Strathaven, who ran and informed their brethren of the approach of the enemy. After prayer by their minister Mr William Hamilton, who acted likewise as commanding officer, they drew up in order, took their station, and gave the soldiers a reception very different from what they expected. Thirty of them were killed; Captain Graham had his horse shot under him, and made a very narrow escape; the covenanters lost only a very few men. Their horses were a great incumbrance to the dragoons, the place of action being almost surrounded by swampy ground. Had the covenanters pursued their advantage, it is believed that they might have cut the whole party to pieces. The success of the covenanters on this occasion encouraged them to muster an army of 8000 men about three weeks afterward at Bothwell bridge, and dispute that passage with the king's forces commanded by the Duke of Monmouth. Here, however, they were defeated with great slaughter, and 1200 of them taken prisoners. After the battle the duke marched his army into this parish, with the view, as was apprehended, of revenging the affair of Drumclog; but after remaining for a few days, during which the cavalry ate up most of the grain in the country, the army retired without doing any mischief. The men were under good discipline, and the duke behaved in every respect with a generosity becoming his high rank. Antiquities.

About a mile from the town of Hamilton, on the west-

Antiquities. ern bank of the Avon, in the duke's great park, are to be seen the remains of the ancient manor-house, called *Cadzow castle*. It was destroyed by the Regent Murray's army after the battle of Langside, and has never been repaired. On the opposite side of the Avon is an imitation of a ruin executed from a design of the Elder Adam. It was built by the Duke of Hamilton in 1790, and is said to have been intended as a representation of Chatelherault in France; of which his ancestors were dukes. Besides this castle there are to be seen in the neighbourhood the vestiges of some inferior ones, of which nothing is known. In the Duke of Hamilton's park here, formerly grazed the wild cows mentioned by naturalists as an untamed breed. They seemed to differ in nothing from the domestic kind, excepting that they were all over white, with black or brown ears and muzzles, and, from their manner of life, very shy, and even fierce when they had not room to fly. They were exterminated, from economical motives, about the year 1760.

Cadzow castle.

Cairns. In this part of the country, mounts of earth, and cairns or heaps of stones, formerly existed in abundance; but in consequence of the progress of improvements, the cairns have been in general used as cheap stone-quarries. They were uniformly found to have been burying-places, containing urns, stone-coffins, and human skeletons. Such of the artificial mounts of earth as have been demolished were found to contain similar objects; and that they had all been erected to the memory of the dead. The construction of cairns differs considerably. Independent of the circumstance that some of these ancient sepulchres are constructed not of stones, but of earth, it may be remarked, that in some the stones are large, in others not, and some are composed of earth and stones. They are of different sizes; while not a few urns and coffins have been

found buried in the earth where not the smallest trace of a cairn could be seen. In some places they are oblong, and in others bell-shaped or conical. Not a few are surrounded with trenches or rows of stones; and sometimes the top is ornamented with a large stone, thought to have been used as an altar, on which victims to the dead were offered. Borlase (Antiquities of Cornwall) informs us, that Harold employed his whole army, and a great number of oxen, in drawing one vast stone to crown the monument of his mother. Not unfrequently cairns were erected to the memory of some great personage who may have died abroad or perished in the sea. This may be the reason why so many empty coffins are found even in the largest; and why these coffins are accompanied with the bones of victims that were slain to the shades of the person whose memory was perpetuated by the mound. Antiquities.

On the northern side of the Clyde, near the centre of the parish of Dalzel, the Roman road has at one spot been preserved entire, so as to point out the line to after times; the cross stone, the emblem of the barons jurisdictions, being placed upon it, and that fenced and secured by a large clump of trees planted around. At this place lies a large heap of the cinders of the Roman forges still untouched. Along this ancient road, at the western boundary of the parish, upon a steep bank, over the river Calder, are the remains of a *prætorium* or Roman encampment. Little more than thirty years ago it was pretty entire; but cultivation has now greatly encroached upon it. At the foot of the bank there is a semicircular arch over the river of good masonry, and very uncommon construction, which has been supposed to be the work of the Romans. In the same neighbourhood, adjoining to the modern mansion-house of Dalzel, the ancient tower or Dalzel.

Antiquities. castle of the barony is kept in repair, on account of its antiquity. It is a high Gothic building with battlements and loop-holes on the top, and a foot-path passed round on its inside; but its age is not known. The old church here was a chaplenary dedicated to St Patrick, and dependent on the abbey of Paisley. The fount for holy water still remains in the wall.

Bothwel castle. The castle of Bothwell is a noble monument of antiquity, and is indeed one of the most magnificent ruins in Scotland. The structure itself is superb, and all the neighbouring objects have an aspect of grandeur. The Clyde takes a fine sweep round the castle; the breadth of the river is here considerable; the stream spreads over a flat rocky bottom; the banks on both sides are very lofty, and adorned with natural wood. On the southern side is the craig of Blantyre, with an ecclesiastical ruin upon the brink of the perpendicular rock; while on the northern bank of the Clyde stands the castle of Bothwell, with a bold aspect to the south, rearing its lofty towers at both ends.

The whole work is executed with polished stone of a red colour. The roofs of the apartments are very lofty; what of it remains occupies a space in length 234 feet, and in breadth 99 feet over the walls. The lodgings are confined to the east and west ends, and many of them sufficiently distinguished. The chapel is marked with a number of small windows, and, like a chamber of state off it, with two large windows to the south. The old well in the corner of one of the towers, penetrating thro' the rock to a good spring, was discovered a few years since. The stair of one of the highest towers is almost entire to the top, which presents an immense height above the river. The court in the middle was probably designed to contain the cattle and provisions in case of an as-

sault; an arrangement peculiar to many ancient castles. The entry is on the north, about the middle of the wall; vestiges of the fosse are yet visible. It appears to have been built and enlarged at different times, and by the several proprietors who occupied it. This castle is known to have belonged to a variety of persons. Edward the First of England granted it to Aymer de Valence, Earl of Pembroke, his governor for the south of Scotland. Robert Bruce afterwards granted it to Andrew Murray Lord Bothwell, who had married Christian, the sister of that king. Archibald Earl of Douglas next obtained it by marrying the heiress of that marriage. After the forfeiture of the Douglasses it was granted to the Crichtons; and on their forfeiture it was bestowed by James the Third on John Ramsay, his favourite. He being also forfeited, King James the Fourth granted it to Adam Hepburn Lord Hailes, whom he created Earl of Bothwell. It again returned to the crown on the forfeiture of James Earl of Bothwell for the murder of Lord Darnley, father to King James the Sixth. This last king granted it to Francis Stuart, son of John abbot of Kelso, who was natural son to King James the Fifth; he being forfeited, his estates were granted to the Lairds of Buccleugh and Roxburgh, from whom the Marquis of Hamilton acquired the superiority of this estate. But it would appear that, previous to the forfeiture of the Earls of Bothwell, the castle had been alienated to the Earl of Angus, in exchange for the lordship of Liddesdale; so that in this way it returned to the family of Douglas. The priory of Blantyre, opposite, was founded in the thirteenth century; and a prior of this monastery was one of the Scottish commissioners appointed to negociate the ransom of King David Bruce, taken prisoner in the battle of Durham in 1346. Thus upon this spot, to whatever point we turn,

Antiquities.

Priory of Blantyre.

Antiquities. and whether we consider the majestic ruins around us, or the singular variety of changes in their history, which have occurred during the lapse of ages, few places will be found affording such awful monuments of the devastations produced by time. We are reminded of the word of the poet,

> Time has seen, that lifts the low,
> And level lays the lofty brow;
> Has seen this broken pile complete,
> Big with the vanities of state.
> A little rule, a little sway,
> A sun-beam in a winter's day,
> Is all the proud and mighty have
> Between the cradle and the grave. PRIOR.

Bothwel church. Bothwell church is an old structure in the Gothic style, seventy feet in length over the walls and thirty-nine in breadth. It is covered with large polished stones laid over an arched roof. The whole edifice is composed of stone strengthened by pilasters to support the weight of the roof. The date of its construction is not known; but the Douglas arms are upon one of the windows quartered with the royal, probably alluding to the marriage of the Earl of Douglas with the heiress of Bothwell, who was granddaughter of Robert Bruce.

Bothwel bridge. The south side of the bridge of Bothwell was the scene of the engagement already mentioned between the Duke of Monmouth and a party of the covenanters in the reign of Charles the Second; 400 of the covenanters were killed, and 1200 taken prisoners.

Cave. In the parish of Shotts, on the north bank of one of the streams called Calder, in the middle of the steep rock upon which the house of Cleland stands, is a large *natural cave*, which had been partly improven by art, capable of holding forty or fifty men, of difficult access. The entry was secured by a door and an iron gate fixed in the solid

BOTHWELL BRIDGE.

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rock. The fire-place, and part of the chimney and floor, still remain. The tradition is, that it had been used as a place of concealment in the troublesome times of the country, as far back as the gallant patriot Sir William Wallace; perhaps by the hero himself and his trusty band; also during the violent feuds between the houses of Cleland and Lauchope; and especially in the convulsions of this country under the last of the Stuarts. Antiquities.

In the parish of Rutherglen, a ditch around an ancient mound of earth being enlarged, for the purpose of being converted into a fish-pond, a passage six feet broad was discovered, laid with unhewn stones, leading to the top of the mount. Near to this passage were dug up two brass or copper vessels, each capable of holding about an English quart, with broad handles of about nine inches in length. The mount is about 12 feet in height, 260 round the base, and 108 round the area on the top. In the middle of this area, a foot and a half below the surface, was discovered a flat whin-stone, about 18 inches diameter, having a large hole cut through the middle, and a smaller one near the edge. Besides the stone were found three of these ancient rings or beads called in Scotland *adder-stones*, or in England *snake-stones*. The colour of the rings in question was of a fine green, apparently formed of a sort of glass, with the enamel pretty entire; the perforation through the middle being remarkably wide.

The account which in Scotland is usually given of the formation of the *adder-stone* is abundantly marvellous. The common report is, that at a certain season of the year a great number of adders assemble together, and that the largest among them casts his skin, which he does by quick convulsions of his body. Through this skin the rest of the serpents force their way with great agility; every one at Adder-stone.

Antiquities. passing thro' leaving a slime or slough behind him. By degrees the skin becomes considerably thick, and upon drying takes the form in which it is afterwards found. To come near the adders while thus employed is said to be attended with no small danger. A circumstance which is reported to have happened in Mossflanders, a well-known peat-moss, lying in the counties of Stirling and Perth, is frequently mentioned as a proof of this. A man travelling through the moss, as the story says, chanced to pass very near the place where a great number of serpents were employed making a stone. Being perceived by them, they instantly set up a horrid hissing, and with one accord darted after the man, who was forced to flee with all his might to save his life. At length, finding himself about to be overtaken by his incensed pursuers, he threw away his plaid that he might run with greater speed. By this circumstance he made a fortunate escape; for returning next day, in search of the plaid, he found it full of holes made by the adders, who had forced themselves through it, and thereby wreaked their vengeance on their imaginary enemy. The adder-stone, thus produced, or the beads and rings substituted in its place, is thought by superstitious people to possess many wonderful properties. It is used as a charm to insure prosperity, and to prevent the malicious attacks of evil spirits. In this case, it must be closely kept in an iron-box, to secure it from the *fairies*, who are supposed to have an utter abhorrence at iron. It is also worn as an amulet about the necks of children, to cure sore eyes and chincough, and some other diseases, and to assist them in cutting their teeth. It is sometimes boiled in water, as a specific for diseases in cattle: but frequently the cure is supposed to be performed by only rubbing with the stone the part affected.

The account given in England of the snake-stones is nearly similar. "Of these the vulgar opinion in Cornwall, and most parts of Wales, is, that they are produced through all Cornwall by snakes joining their heads together and hissing, which forms a kind of bubble like a ring about the head of one of them, which the rest, by continual hissing, blow on till it comes off at the tail, when it immediately hardens and resembles a glass-ring. Whoever found it was to prosper in all his undertakings. These rings are called *glaen nadroedh*, or *gemmæ anguinæ*. *Glune* in Irish signifies *glass*. In Monmouthshire they are called *main magl*, and corruptly *glaem* for *glaen*. They are small glass-amulets, commonly about half as wide as our finger-rings, but much thicker, usually of a green colour, though some are blue, and others curiously waved with blue, red, and white. M'Lhuyd has seen two or three earthen rings of this kind, but glazed with blue, and adorned with transverse streaks or furrows on the outside. The smallest of them might be supposed to have been glass-beads worn for ornaments by the Romans, because some quantities of them, with several amber-beads, had been lately discovered in a stone-pit near Gardford in Berkshire, where they also dug up Roman coins, skeletons, and pieces of arms and armour. But it may be objected, that a battle being fought between the Romans and Britons, as appears by the bones and arms, these glass-beads might as properly belong to the latter. And indeed it seems very likely that these snake-stones, as we call them, were used as charms or amulets among the Druids of Britain on the same occasion as the snake-eggs among the Gaulish Druids. For Pliny, who lived when these priests were in request, and saw one of these snake-eggs, gives the same account of the origin of them as our common people do of their glain nair. 'There is (says that

Antiquities. Snake-stone.

Antiquities. naturalist) a kind of egg in great repute in Gaul disregarded (*omissum*) by the Greeks. A number of snakes in summer, rolling together, form themselves into a kind of mass with the saliva of their mouth and froth of their bodies, and produce what is called the *anguinum* or snake's egg. The Druids say, that by their hissing it is borne up into the air, and must be caught in a mantle before it reaches the earth. The person who catches it must escape on horseback, for the snakes will pursue him till they are stopped by a river. The proof of it is if it floats in the stream even when set in gold. As the magicians know how to conceal their secret arts, they pretend it must be caught in a certain period of the moon, as if it was in the power of man to influence the operation of the snakes. I have seen one of these eggs, about the size of a small round apple, covered with a cartilaginous crust, like the claws of the arms of the polybus, and used as a Druidical symbol. It is said to be wonderfully efficacious in promoting of law-suits, and procuring favourable audiences of princes; insomuch, that I am well assured a Roman knight among the Vocentii was put to death by the late Emperor Claudius merely for having one of them in his bosom at a trial.' Thus (continues M'Lhuyd) we find it very evident that the opinion of the vulgar concerning the generation of these adder-beads or snake-stones is no other than a relic of superstition or perhaps imposture of the Druids; but whether what we call snake-stones be the very same amulets that the British Druids made use of, or whether this fabulous origin was ascribed formerly to the same thing, and in after times applied to these glass beads, I shall not undertake to determine. Dr Borlase, who had penetrated more deeply into the Druidical monuments of this kingdom than any other writer before or since, observes, that instead of the natu-

ral *anguinum*, which must have been very rare, artificial rings of stone, glass, and sometimes baked clay *, were substituted as of equal validity †." Antiquities.

It may be observed, that as these sort of beads or rings appear to be made of the old Egyptian paste or glass anciently so much admired in Europe, there is every reason to believe that they were originally brought from the east, and afterwards worn as an amulet or charm by the less intelligent people of the west. It is observed in the "Introduction to Tassie's Gems by R. S. Raspe," that "the famous old glass-manufactures of Egypt, Tyre, and Sidon, which furnished the Phœnicians with great and various objects of exportation to all Europe, and to the remotest nations, would of course very soon furnish their sagacious neighbours, the Greeks, with the very best materials for speculation and imitation. In Egypt they made, in the remotest antiquity, rich coloured glass and enamels, of which various proofs are found amongst the Egyptian antiquities, and the traders dispersed them over all the world in various forms, even that of glass-beads; and, we have very good reason to apprehend, for purposes similar to those for which our Christian traders in slaves manufacture and export them to the coast of Guinea and Madagascar. Such glass-beads, sometimes curious and apparently Phœnician workmanship, and here in England erroneously enough called Druids beads, are frequently found in the urns and sepulchral monuments of the barbarous nations which the Phœnicians formerly visited, for the laudable purpose of bartering baubles for amber, gold, tin, slaves, girls, and other valuable commodities."

* In the year 1790, one of cornelian was found at Easter Glentore, in the parish of New Monkland.

† Cambden's Britannia. Lond. 1787. Vol. ii. p. 571.

Antiquities. Castlemilk. The house of Castlemilk is here worthy of notice, on account of its connection with ancient events. It is situated on the northern declivity of Cathkin hills, in the parish of Carmunnock, about a mile and a quarter from the town of Rutherglen. It is the family-seat of Sir John Stewart of Castlemilk, Baronet. This ancient place was for centuries past called Castletown or Casseltown, but now more frequently Castlemilk or Castelmilk, from the Castle of Milk, a river in Annandale, in the county of Dumfries; which castle was anciently possessed by the ancestors of this family. The old building, the age of which is not known, is pretty large, and is of a very ancient construction. The walls are extremely thick, and terminate above in a strong battlement. Originally the windows were few and narrow, and the stairs very strait. The whole building is kept in excellent repair, and contains not a few commodious apartments. The most remarkable is one that goes under the name of *Queen Mary's room*, because (as report says) her Majesty lodged in it the night before the battle of Langside. The ceiling of this memorable room is ornamented with the arms of the kings of Scotland in the Stuart line, and with the arms of all the crowned heads of Europe with whom the Stuarts were connected. Several additions have been made to the house, by which it is rendered very commodious. The pleasure-grounds have been laid out to the best advantage. Few places in Scotland enjoy a more agreeable situation. It commands a prospect which, for a mixed variety of extensive, majestic, rich, and beautiful objects, is probably not equalled anywhere in Scotland; as it takes in the city of Glasgow, with the strath of Clyde, filled with prospering manufactures; whilst the vast and far-distant mountains of Lennox, Argyle, Perthshire, &c. mingling with the sky, terminate the view.

In the parish of Calder is pointed out the spot, called *Rob Roy's town*, at which, on the 11th September 1303, Sir William Wallace was betrayed by Sir John Monteith to Edward the First of England. An oaken joist, which made part of a barn in which the Scottish hero was taken, is still exhibited. Antiquities.

In the parish of Govan, about two miles south-east of the church, are the remains of an old castle of considerable strength. Over a door of it is the date 1585, and an inscription, bearing that it was built by Sir John Maxwell of Pollock, in whose family it still continues. On an elevated situation, near to the water called *Kelvin*, in the same parish, within a few hundred yards of the Clyde, are the ruins of the country residence of the ancient bishops of Glasgow. The property called *Partick* was granted by David the First to these prelates. Near the village of Govan is an artificial mound of earth, whose diameter at the base is 150 feet, and at the top 102 feet.

The royal boroughs in this county are, Lanark, Rutherglen, and Glasgow. The last of these is of so much importance that we shall consider it separately and apart from the county in which it is situated. Royal boroughs.

The royal borough of Lanark, from which the county derives its name, is of very great antiquity. At this place the country ascends rapidly from the Clyde towards the northeast and the south-west. On the north-eastern ascent, at the distance of about a mile from the river, stands the town. It consists of a principal street, which is very spacious, and which descends in a direction towards the Clyde. From the foot of this principal street, where the church and town-house stand, a variety of inferior and more narrow streets branch off in different directions. The distinction, to a stranger, between an inland borough Lanark.

Lanark. and a large village in Scotland is chiefly this, that as the boroughs have a political constitution and public funds, they are enabled to pave the streets of the town, which cannot always be done in villages. The principal streets of Lanark near the centre of the town are, upon the whole, well paved with whin-stone. The community enjoy the property of a common, called *Lanark moor*, consisting of about 1500 acres. As this mode of holding property prevents the possibility of its improvement, it is of very little value; but about ten years ago the magistrates granted a feu of about 300 acres of it to an individual, upon a feu-right, at a reserved rent of five shillings *per* acre; and efforts have been successfully made to improve this part. This was an extremely dull place till within these fifteen years, that Mr Dale erected the great cotton-mills, formerly noticed, immediately below the Cora Linn. Not only was a considerable addition thus made to the population of the neighbourhood, but a degree of activity, previously unknown, was introduced into every department of business. Lanark is said to have
Castle. been anciently fortified. But no vestiges of such works can be now discovered; but below the town, that is, between it and the river, is the Castlehill, which has somewhat the appearance of an artificial mount, and perhaps was originally fortified by the Romans, as General Roy makes mention of a fine silver *faustina* that was found here. Upon this hill there formerly stood a castle which tradition ascribes to David the First. The charter by William the Lyon in favour of the town of Air is dated from this castle, or at Lanark, *anno* 1197; and there are still in its neighbourhood places called *Kingson's know*, *Kingson's stane*, and *Kingson's moss*, which favours the tradition of its having been a royal residence. That it belonged to the crown appears from the negociation be-

tween John Baliol and Philip of France in 1295, where Philip agrees to give his niece, the eldest daughter of the Duke of Anjou, in marriage to the son and heir of Baliol; and in security of the lady's jointure, which was L.1500 Sterling a-year, Baliol mortgaged his estates in France and some of the crown-lands in Scotland, viz. the castle and castellany of Lanark, Cadzow, Maulsley, &c. This castle was frequently in the hands of the English during the thirteenth century; and several of the coins of the First Edward have been found here. A bowling-green is now erected upon the site of the castle. Lanark.

The old parish-church of Lanark is now to be seen in ruins, about a quarter of a mile to the south-east of the town. The date of its construction is not known. It has been an elegant Gothic building of hewn stone, divided in the middle from one end to the other by a wall supported upon pillars, forming five or six fine arches; and around it is the burying ground and cemetery of the town and parish. This church appears, from Blind Harry's History of Sir William Wallace, to have been the only church of the town in his days. Thus, *ad annum* 1297, he makes mention of Wallace passing Religious antiquities.

> On from the kirk that was *without the town*.

About half a mile to the eastward of the town are the ruins of the hospital of St Leonard, probably founded by Robert the First. In 1393, Sir John Dalzel, a predecessor of the Earl of Carnwath, obtained from Robert the Third, to himself in liferent, and to Walter Dalzel his son in fee, the whole revenue belonging to St Leonard's hospital within the borough of Lanark, upon condition that he and his heirs shall provide a qualified person to celebrate three masses once every seven years for the salvation of Robert the Third, Anabella his queen, and

Lanark. all their children *for ever*. The ruins of this hospital have lately been dug up and ploughed. Some human bones, carved stones, and an urn, were discovered among them. The hospital lands now belong to the borough, and are held by it of the family of Carnwath for payment of twenty merks annually, which by the charter is declared to be for the use of the poor.

A monastery of Franciscans or Grayfriars was founded here by Robert the First in 1314. It was situated to the west of the present parish-church. The burial-ground belonging to it is still called the *friars yards*. It is known from authentic documents that a general chapter of all the Grayfriars of the kingdom was held at this monastery on the 11th July 1490.

This borough enjoyed the good fortune of possessing, for upwards of half a century, the brother-in-law of the author of the Seasons as the teacher of the grammar school here. He was a man of talents, of great assiduity and success in his profession. The result of his labours has been, that great numbers of young men, with no other patrimony than the literature which they derived from his instructions, have been enabled to attain to important stations in society, and to fill with respectability the different departments of science or of active life.

New Lanark cotton mills. Before quitting this town, it may be proper to take notice more particularly of the village of New Lanark, which lately belonged to Mr David Dale, and now to Messrs Owen and Company. This village was built as an appendage to the great cotton-works. The situation of these works is singular, being in a romantic glen, surrounded on all sides by high grounds, excepting towards the Clyde. They were erected on this spot on account of the great command of water which could be obtained. A subterraneous aqueduct has been carried through the solid

rock for the space of several hundred yards, for the sake of giving motion to the machinery. The first mill was built in the year 1785; and since then three others have been successively erected nearly adjoining. At these mills the spinning of cotton-yarn is carried on to a greater extent than at any other place in Scotland, or probably in Britain. Upwards of 400 children are here employed for that purpose; the greatest part of whom are indented for a certain number of years, and receive their lodgings, victuals, &c. from the proprietors; the remainder lodge with their parents, mostly at the village of New Lanark adjoining. The spinning rooms are of the whole extent of the buildings without any subdivisions, and are from 120 to 150 feet long, from 26 to 30 feet wide, and all of them in height 10 feet from floor to floor, or 9 feet clear of the beams. These rooms, which contain each about 2000 spindles, are carefully ventilated, by regularly opening the windows at the top at both sides; and to increase the circulation of air still more, air-holes six inches square, on a level with the floor, are opened below every other window throughout the walls, at the distance of 14 feet from each other; but these are only of advantage in summer, as the cold of winter precludes the use of them. The means of purification in use, are washing the walls and ceilings of the rooms at least once a-year with new-slacked lime, and weekly washing of the floors and machinery with scalding water, and frequent and constant brushing of the walls, ceilings, and floors. The greatest number of persons in one room is 75; in some there are only 50. The hours of labour are eleven and a half each day, from six o'clock in the morning till seven o'clock at night, with half an hour of intromission for breakfast, and a whole hour for dinner. Lanark.

Lanark.

When fevers or any epidemical disease appear in the boarding houses where the children are accommodated, the means used to prevent the infection are the immediate removal of the sick to a detached part of the house, and frequently sprinkling and fumigating the bed-rooms with vinegar. In the sleeping rooms, which are six in number and very large, three children are allowed to each bed. The ceilings and walls of these rooms are washed twice a-year with hot lime, and the floors with scalding water and sand. The children sleep on beds with cast-iron frames, with tikes filled with straw, which is changed every month. The bed-rooms are carefully swept, and the windows thrown open every morning; in which state they remain through the day.

The village of New Lanark owes its existence to the erection of this new manufacture. It consists of neat substantial houses of from one to five stories in height, covered with slate, and formed into regular streets. In this village the people employed about the works and their families reside; and, according to the latest computation, this spot, which fifteen years ago contained not a human being as an inhabitant, is now peopled with upwards of 1500 souls. Here also one of the partners, and the principal manager, have houses fitted up in a more elegant style, and accommodated with gardens in front. Besides those people who reside here, many more are employed in Lanark and the adjacent country as weavers, spinners, pickers, &c. It is to the establishment of this manufacture that we are to ascribe the growing prosperity of the latter town. Money is now more frequent there, industry is awakened, and new branches of trade are carried on which before had no existence in the neighbourhood.

The royal borough of Rutherglen is situated in the Lower Ward of the county of Lanark, and within the bounds of the presbytery of Glasgow and Air. It stands on the south bank of the river Clyde, in north lat. 55° 51′, and west long. 4° 13′. It is two and a half miles to the south-east of Glasgow, and about nine miles to the west of Hamilton. It appears to have been erected into a royal borough in the reign of King David the First; and charters are extant confirming its privileges by Robert Bruce, James the Fifth, and James the Sixth. At present the most important part of the town consists of one principal street, and a lane called the *Back-row*, parallel to each other, in a direction nearly east and west. The principal street, which is straight and well paved, is nearly half a mile in length, and is generally about 112 feet broad. It appears that the river Clyde, in the lower part of its course, was once deeper than at present, and that Rutherglen was once a sea-port town, or rather the only town of mercantile importance in the valley of Clyde, and vessels came daily to it. Accordingly, on the ancient seal of the town, a ship is introduced as a principal part of the coat of arms. When Glasgow consisted of a few priests houses attached to the cathedral, with their dependants, Rutherglen was comparatively a busy spot, whose inhabitants devoted themselves to civil and commercial employments. Glasgow appears even to have been within the bounds over which Rutherglen claimed jurisdiction; and accordingly a charter is in existence, bearing date 1226, whereby a grant is made to the bishop of Glasgow and his successors, that no toll or custom shall be levied in Glasgow by the inhabitants of Rutherglen. Rutherglen.

In former times the castle of Rutherglen was considered as one of the most important Scottish fortresses. During the Castle.

Rutherglen. wars about the succession, the castle of Rutherglen being in possession of the English, was attacked by Bruce in 1300. Edward the First sent his nephew, the young Earl of Gloucester, to raise the siege, which he appears to have been successful in doing; but Edward Bruce seems to have retaken it. The castle was kept in good repair till a short time after the battle of Langside, when it was burnt by order of the regent, out of revenge against the family of Hamilton, in whose custody it then was. One of the principal towers was, however, soon repaired, and being enlarged by some modern improvements, became the seat of the Hamiltons of Eliston, lairds of Shawfield, &c. At length, on the decline of that family, it was, about a century ago, left to fall into ruins, and by frequent dilapidations was soon levelled with the ground. The walls of this ancient tower were very thick and extremely solid; each corner rested upon an uncommonly large foundation-stone, that measured five feet in length, four and a half in breadth, and four in thickness. These corner-stones being very massy, were allowed to remain till about thirty-four years ago, when they were quarried out, as being cumbersome to a kitchen-garden, into which the site of the fortress of Rutherglen is now converted. Some carved stones belonging to the castle are built into the dikes adjoining to the town. Those that made part of the cornice, which was of that kind commonly known by the name of the *block cornice*, are well cut, and remarkably beautiful.

The final ruin of that stately edifice, like many others, has been ascribed to the uncommon wickedness and persecuting spirit of its proprietors. The following extract from Woddrow's Church History may be mentioned as a proof of this:

"October 13th, 1660. Mr John Dickson, minister of the gospel at Rutherglen, was brought before the committee of estates, and was imprisoned in Edinburgh tolbooth. Information had been given by Sir James Hamilton of Elistoun and some of his parishioners, of some expressions he had used in a sermon alleged to reflect upon the government and committee, and tending to sedition and division. This good man was kept in prison till the parliament sat, his church vacated, and he was brought to much trouble. We shall afterwards find him prisoner in the Bass for near seven years; and yet he got through his troubles, and returned to his charge at Rutherglen, and for several years after the revolution served his Master there till his death in a good old age; while that family who pursued him is a good while ago extinct, and their house, as Mr Dickson very publicly foretold in the hearing of some yet alive, after it had been a habitation for owls, the foundation-stones of it were dug up. The inhabitants there cannot but observe, that the informers, accusers, and witnesses, against Mr Dickson, some of them then magistrates of the town, are brought so low that they are supported by the charity of the parish." Rutherglen.

About 150 yards to the south of the main street is a kind of lane known by the name of *Din's dikes*. A circumstance which befel the unfortunate Queen Mary, immediately after her forces were routed at the battle of Langside, has ever since continued to characterise this place with an indelible mark of opprobrium. Her Majesty, during the battle, stood on a rising ground about a mile from Rutherglen. She no sooner saw her army defeated than she took her precipitate flight to the south. Din's dikes unfortunately lay in her way. Two rustics, who were at that instant cutting grass hard by, seeing her Majesty flying in haste, rudely attempted to stop her, and

Rutherglen. threatened to cut her to pieces with their scythes if she presumed to proceed a step further; but she was immediately rescued from these barbarians, and proceeded in her flight towards England.

Church. The church of Rutherglen is a small but very ancient structure; the oldest part of it is 62 feet in length and 25 in breadth.

This kirk is rendered famous on account of two transactions, in which the fate of Sir William Wallace and his country were deeply concerned. It was in this place of worship that a peace between Scotland and England was concluded, 8th February 1297.

In Ruglen kyrk ye traist yan haif yae set,
A prowes maid to meet Wallace but let.
Ye day off his approchyt windyt fast,
Ye Grit Chaualar and Amar yedder past;
Syne Wallace came, and hys men weill beseyn,
With hym fyfty arrayit all in greyne;
Ilk ane off yaim a bow and arrows bar,
And lang swords, ye quhilk full scharply schar.

It was in this place also that Sir John Monteith contracted with the English to betray Wallace.

Sour cakes. Rutherglen has long been famous for the singular custom of baking what are called *sour cakes*. About eight or ten days before St Luke's fair (for they are baked at no other time in the year), a certain quantity of oatmeal is made into dough with warm water, and laid up in a vessel to ferment. Being brought to a proper degree of fermentation and consistency, it is rolled up into balls proportionable to the intended largeness of the cakes. With the dough is commonly mixed a small quantity of sugar, and a little anise-seed or cinnamon. The baking is executed by women only; and they seldom begin their work till after sun-set, and a night or two before the fair. A large space of the house, chosen for the purpose, is marked out

by a line drawn upon it. The area within is considered as consecrated ground, and is not by any of the bystanders to be touched with impunity. A transgression incurs a small fine, which is always laid out in drink for the use of the company. This hallowed spot is occupied by six or eight women, all of whom, except the toaster, seat themselves on the ground, in a circular form, having their feet turned towards the fire. Each of them is provided with a bakeboard about two feet square, which they hold on their knees. The woman who toasts the cakes, which is done on an iron plate suspended over the fire, is called the *queen* or *bride*, and the rest are called her *maidens*. These are distinguished from one another by names given them for the occasion. She who sits next the fire towards the east is called the *todler*; her companion on the left hand is called the *bodler* *; and the rest have arbitrary names given them by the bride, as *Mrs Baker*, *best* and *worst maids*, &c. The operation is begun by the todler, who takes a ball of the dough, forms it into a small cake, and then casts it on the bakeboard of the bodler, who beats it out a little thinner. This being done, she in her turn throws it on the board of her neighbour; and thus it goes round from east to west, in the direction of the course of the sun, until it comes to the toaster, by which time it is as thin and smooth as a sheet of paper. The first cake that is cast on the girdle is usually named as a gift to some well-known cuckold, from a superstitious notion that thereby the rest will be preserved from mischance. Sometimes the cake is so thin as to be carried by the current of the air up into the chimney. As the baking is wholly

Rutherglen

* These names are descriptive of the manner in which the women so called perform their part of the work. To *todle*, is to walk or move slowly like a child; to *bodle*, is to walk or move more quickly.

Rutherglen. performed by the hand, a great deal of noise is the consequence. The beats, however, are not irregular, nor destitute of an agreeable harmony, especially when they are accompanied with vocal music, which is frequently the case. Great dexterity is necessary, not only to beat out the cakes with no other instrument than the hand, so that no part of them shall be thicker than another, but especially to cast them from one board on another without ruffling or breaking them. The toasting requires considerable skill; for which reason the most experienced person in the company is chosen for that part of the work. One cake is sent round in quick succession to another, so that none of the company is suffered to be idle. The whole is a scene of activity, mirth, and diversion. As there is no account, even by tradition itself, concerning the origin of this custom, it must be very ancient. The bread thus baked was doubtless never intended for common use. It is not easy to conceive how mankind, especially in a rude age, would strictly observe so many ceremonies, and be at so great pains in making a cake, which, when folded together, makes but a scanty mouthful. Besides, it is always given away in presents to strangers who frequent the fair. The custom seems to have been originally derived from paganism, and to contain not a few of the sacred rites peculiar to that impure religion, as the leavened dough, and the mixing it with sugar and spices, the consecrated ground, &c.; but the particular deity for whose honour these cakes were at first made is not perhaps easy to determine. Probably it was no other, than the one known in Scripture (Jer. vii. 18.) by the name of the *Queen of Heaven*, and to whom cakes were likewise kneaded by women. Besides baking sour cakes, it has for a long time past been a custom in Rutherglen to prepare *salt roasts* for St Luke's fair. Till of late

Salt roasts.

almost every house in town was furnished with some do- Rutherglen.
zens of them. They were the chief article of provision asked for by strangers who frequented the market.

What is called in the neighbourhood of Edinburgh *Corstorphine cream*, and in the rest of the country *batted kit*, has from time immemorial been prepared in considerable quantities in Rutherglen, and is here denominated *Rutherglen cream*.

In Rutherglen, Lanark, and some other royal boroughs, Riding the land meers.
the custom is still kept up of riding the marches, or *land meers* as they are called. This is done sometimes annually, and sometimes less frequently. At Rutherglen the ceremony is performed in the following manner: The magistrates, with a considerable number of the council and inhabitants, assemble at the cross, from which they proceed in martial order, with drums beating, &c. and in that manner go round the boundaries of the royalty, to see if any encroachment have been made on them. These boundaries are distinguished by march-stones set up at small distances from each other. In some places there are two rows about seven feet distant. The stones are shaped at the top, somewhat resembling a man's head, but the lower part is square. This peculiar form was originally intended to represent the god Terminus, of whom there are so many rude images. Every new burgess comes under an obligation to provide a march-stone at his own expence, and to cut upon it the initials of his name, and the year in which it was set up. It has been a custom, time out of memory, for the riders of the marches to deck their hats, drums, &c. with broom, and to combat with one another at the newly erected stone, out of respect perhaps to the deity whose image they had set up, or that they might the better remember the precise boundary at that place. This part of the exercise is now post-

Villages. poned till the survey is over, and the company have returned to the cross, where having previously provided themselves with broom, they exhibit a mock engagement, and fight seemingly with great fury till their weapons fail them, when they part in good friendship. At Lanark this last part of the ceremony is not used; but the magistrates and the inhabitants ride round the moor, preceded by music, leaving to the town-clerk and witnesses called for the occasion to inspect narrowly the limits of the property of the community, that no encroachments be made upon it.

Crawford. This county contains in its lower part, especially in the vicinity of Glasgow, a variety of thriving villages; but few of them are worthy of very special notice. Beginning at the head or southern extremity of the county, the village of Crawford may with propriety be noticed on account of its singular constitution. It consists of above twenty freedoms, which, till within twenty-six years ago, were held runrig. These freedoms were held in feu under the families of Crawford or Douglas. Besides the masters of these freedoms, who were called *lairds*, and their wives *ladies*, there was a subordinate rank, who feued ground for a house and yard. Each freedom consisted of four or five acres of croft land, parcelled out in all the different parts of the town, with a privilege of keeping a certain number of sheep, cows, and horses, on the hill or common pasture. This little republic was governed by a *birly court*, in which every proprietor of a freedom had a vote. If the proprietor resided not in the place, his tenant voted for him. The great business of the court was to determine the proportion and number of sheep, cows, and horses, which the respective proprietors should keep on the common pasture. As there was but little subordination in the court, it was remarkable for

nothing so much as the noise that attended its delibera- Villages.
tions. From the court, that was held weekly, the members adjourned to an ale-house. Thus the year went round; and the people were contented with what the land produced by the most negligent cultivation. The separation of the properties from each other has improved the mode of culture; and a portion of the active spirit of the age has reached this corner. The old people speak with admiration of the easy life of former times, and of the striking difference between them and the present. Indeed, over the whole of this part of the country, it is said that one farm-servant now performs at least as much work as was formerly done by two; and that he also performs it in a far more skilful manner.

In descending the country, there are small villages near Biggar.
most of the parish-churches; but nothing that has the appearance of a market-town above Biggar, which stands nearly three miles east from Tintoc, on the road from Edinburgh to Leadhills, at the distance of twenty-seven miles from Edinburgh, and eleven from Lanark. Including a suburb, called the *Westraw*, it is about half a mile in length, and consists in general of two long rows of houses placed at a much greater distance from each other than is necessary for the breadth of a street. One of the rows to the northward consists in general of houses neatly built, and covered with slate; but a great proportion of those on the opposite side are covered with thatch, and have a meaner appearance. The village, as formerly noticed, was held anciently under the Earls of Wigton; and the properties in it are now held in feu under Lord Elphinston, as successor to that family. There is a tradition that it once claimed the privileges of a borough of barony, and as such of governing itself, and acting as a community. The properties in the village are accord-

Villages. ingly denominated borough lands. A certain number of feet fronting the street is termed a borough land, and runs backward to the distance of many hundred yards, forming gardens and croft land. Besides this, every borough land has attached to it a portion of what is called the borough moor, consisting, in the present times, of very fine cultivated land, and also a share of a moss at the distance of about a mile from the village. Out of this moss peat is dug, by making round pits, instead of cutting it regularly along, as is done in other places. One advantage, or perhaps it may be thought a disadvantage, that results from this mode of digging peat, is, that the moss in time grows up again, and fills the holes out of which peat had been formerly dug. At the same time it is long before this new sort of peat, which, from the shelter around and the abundance of water, grows too rapidly, can be considered as equal to the ancient moss. The right of pasturage in the moss belongs in common to the feuars of the village.

There is here a weekly market during winter, chiefly for oat-meal, or as a place of meeting for the inhabitants of the neighbouring country; and there are four annual fairs. One of these is about Midsummer; and an ancient practice has from time immemorial existed, that in the evening preceding the fair, the baron bailie, for the amusement of the company that may have then arrived in the village, advertises a foot-race to be run along the street of the village. A pair of gloves is the prize. It was also an ancient custom, which was sometimes productive of riots, to throw out a foot-ball. The young men immediately divided themselves into two parties. The ball, which was made of leather stuffed with wool, was thrown up at the cross in the middle of the town; the party that could kick the ball, in spite of their antago-

nists, to the opposite end of the village were the victors; but no prize was won except the joy of success. Villages.

Here, as well as in several other places in Scotland, a very singular ancient practice is at times, though but rarely, revived. It is called *riding the stang*. When any husband is known to treat his wife extremely ill, by beating her, and when the offence is long and unreasonably continued, while the wife's character is unexceptionable, the indignation of the neighbourhood, becoming gradually vehement, at last breaks out into action in the following manner: All the women enter into a conspiracy to execute vengeance upon the culprit. Having fixed upon the time when their design is to be put into effect, they suddenly assemble in a great crowd, and seize the offending party. They take care at the same time to provide a stout beam of wood, upon which they set him astride, and, hoisting him aloft, tie his legs beneath. He is thus carried in derision round the village, attended by the hootings, scoffs, and hisses of his numerous attendants, who pull down his legs, so as to render his seat in other respects abundantly uneasy. The grown-up men, in the meanwhile, remain at a distance, and avoid interfering in the ceremony. And it is well if the culprit, at the conclusion of the business, have not a ducking added to the rest of the punishment. This, however, forms no essential part of the ceremony. Of the origin of this custom we know nothing. It is well known, however, over the country; and within these six years, it was with great ceremony performed upon a weaver in the Canongate of Edinburgh. Riding the stang.

This custom can scarcely fail to recal to the recollection of the intelligent reader the analogous practice among the Negroes of Africa, mentioned by Mungo Park, under the denomination of the mysteries of Mumbo Jumbo. The

Villages. two customs, however, mark in a striking manner the different situations of the female sex in the northern and in the middle regions of the globe. From Tacitus and the earliest historians we learn, that the most ancient inhabitants of Europe, however barbarous their condition in other respects might be, lived on terms of equal society with their women, and avoided the practice of polygamy; but in Africa, where the laws of domestic society are different, the husbands, as the masters of a number of enslaved women, find it necessary to have recourse to frauds and disgraceful severities to maintain their authority; whereas in Europe we find, among the common people, the men disapproving of every sort of cruelty, and readily permitting the women to protect each other against the casual injustice committed by individuals of the ruling sex.

Carnwath. Carnwath, at the distance of twenty-five miles from Edinburgh, and six from Lanark, is the only other village of any importance in the Upper Ward; and even this village is extremely trifling, being considerably less in size than Biggar.

Strathaven. The village of Strathaven, in the Middle Ward, was erected into a borough of barony in the year 1450. It possessed an extensive commonty, all of which has long since been converted into private property. It has a weekly market and a number of annual fairs; but it has no public funds, and has no other magistracy than a baron bailie appointed by the Duke of Hamilton.

Hamilton The town of Hamilton stands in a low situation upon the Clyde, skirting around the bottom of a rising ground of about three quarters of a mile in length. It is a considerable thoroughfare, as the roads from Glasgow towards England, and from Edinburgh to Airshire, pass through it. In the middle there is a prison and town-

STRATHAVEN CASTLE.

LANARKSHIRE.

house, built in 1649. The parish-church stands above the town upon a rising ground. It was designed by the Elder Adams, and makes a good appearance. Adjoining to the town-house stands an hospital or alms-house, which was built instead of one that stood in the lower part of the town near Hamilton-house. This hospital, which was endowed by the family of Hamilton and others, contains lodgings for eight poor men, and a hall for morning and evening prayers. At some distance from it is another hospital for four old men and their families, endowed in 1775 by Mr William Aikman, a proprietor of lands in the parish, who had been a merchant in Leghorn. Villages.

It is difficult to determine at what time this town was built. It originally stood lower down, clustering around the duke's house, or palace as it is sometimes called; but these buildings being purchased and pulled down, the town has since stretched upwards to the south and west; so that the palace is left detached below it. One house still standing has the date 1533 cut over the gateway; and part of some others are said to be still older. A writing among the town-records, which bears to have been presented to the court of session in 1580, sets forth, that the "Town was erected into a free borough of barony by the king's most noble progenitors in the year 1456." In 1548 Mary Queen of Scotland created it a free royal borough; but the rights and privileges thus acquired from the crown were after the restoration resigned into the hands of William and Ann Duke and Duchess of Hamilton, who in 1670 restored to the community its former possessions, and erected it into a borough of regality, dependent on them and their successors; and thus it has continued, after some ineffectual struggles, to this time. History of Hamilton.

At Hamilton was a collegiate church, founded in the

Villages. year 1451 by Sir James Hamilton of Cadzow, ancestor to the dukes of Hamilton, for a provost and several prebendaries. It is also the burial-place of that family.

In the time of Edward the Second lived Sir Gilbert de Hamilton or Hampton, an Englishman of rank, who happening at court to speak in praise of Robert Bruce, received an insult from John Despenser, chamberlain to the king, whom he fought and slew. Dreading the resentment of that potent family, he fled to the Scottish monarch, who received him with open arms, and established him at the place now possessed by the Dukes of Hamilton. In after times the name was changed from *Cadzow* to *Hamilton*; and in 1445 the lands were erected into a lordship, and the then owner, Sir James, sat in parliament as a lord or baron. The same nobleman founded the collegiate church at Hamilton in 1451. The endowment was ratified at Rome by the pope's bull, which he went in person to procure. Hamilton house, which stands on the level valley between the town and the river Clyde, is a large pile, but of a dull and disagreeable aspect, having two deep wings at right angles with the center. The collection of paintings which it contains is extremely valuable, and has always attracted the attention of travellers. A portrait of James the First of England and Sixth of Scotland, by Cornelius Janson, and one of Charles the First on horseback by Vandyke, together with a series of family pictures by Vandyke, Mytens, Kneller, Lely, Hamilton, and Reynolds, form a very superb collection of portraits. The miscellaneous part of the old collection has been greatly enriched, or rather entirely eclipsed, in consequence of the additions made by the present duke, whose fine taste and partiality for the fine arts, previous to his accession to the dignity, had induced him to form a very extensive collection of the works of ancient mas-

Hamilton house and paintings.

HAMILTON PALACE.
Lanarkshire.

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ters. The greatest part of these have been removed from his seat of Ashton Hall, Lancashire, to the palace of Hamilton. Among these, two pictures of the Holy Burial or Entombing of Christ, the one by Poersin, the other by Titian, are calculated to exhibit by what different styles great artists produce similar effects. A large Cattle-Piece, by Giacomo Bassano, is highly valued, as are the specimens of Andrea del Sarto. The stories of St Sebastian and Cain and Abel are large pictures, by Guido, in a grand style. A Holy Family by Il Frari, a St John by Guercino, the Marriage of Jacob and Laban by Peter de Tortona, and Madonas by Sassaferats, are beautiful pictures, and the Village Lawyer by Holbein. Two Misers by Q. Matsey, and a Conversation-Piece by Bronar, are universally admired. A particular and discriminating account of this noble collection would be a difficult task, and extend to a length unsuitable to our purpose. We are glad to hear that this is likely to be executed by an ingenious artist of this country (Mr Walker), who has himself made a very valuable collection. But though we must avoid detail, it would be unpardonable to pass over two pictures which would be prominent in any collection, and which bestow a superior splendour upon this. These are Daniel in the Den of Lions by Rubens, and Earl Denbigh going out a-shooting by Vandyke. These magnificent pictures have been commented on by all tourists, and never failed to command the highest approbation. In the first, the situation of the prophet, amidst a group of such ferocious animals, some of which are subdued into tameness, and others are bridled in the midst of their rage, is adequately conceived and forcibly expressed. The uplifted eyes, and the clasped hands and elevated arms of Daniel, exhibit strong feelings, which have additional energy, that his limbs are folded one over the

Villages.

The Daniel of Rubens.

Villages. other, and indicate the recent state of thoughtfulness and melancholy from which he has awakened to a burst of piety and gratitude. The whole is painted in a simple and harmonious style of colouring; certainly not with the usually sanguine and full pencil of Rubens, but in a tone which in a good light could not fail to produce a deep and a brilliant effect.

The remarks made by William Gilpin, A. M. prebendary of Salisbury, in his Tour, may here with propriety be inserted. "The glory of Hamilton is Daniel in the lions den by Rubens. It would perhaps be doing more than justice to its merit to rank it above the most capital pictures by this master in England; two or three of these especially in the possession of the Duke of Marlborough, and that celebrated one of Simon's Supper at Houghton Hall. But without entering into any invidious comparison, it is certainly a noble work. The prophet is represented sitting naked in the middle of a cave surrounded by lions. An opening at the top, through which he had been let down, affords light to the picture. In his face appears ineffable expression. Often do we hear the parading critic, in a gallery of pictures, displaying the mixed passions where they never existed. For myself, indeed, I cannot see how two passions can exist together in the same face. When one takes possession of the features, the other is expelled; but if the mixed passions ever did exist any where, they exist here. At least, from the justness of the representation, you are so entirely interested in the action, that the imagination is apt to run before the eye, and fancy a thousand emotions both of hope and fear, which may not really exist. The former appears the ruling passion; but a cold damp sweat hangs evidently on the cheek, the effect of conflict. The whole head indeed is a matchless piece of art; nor is the figure inferior. The

hands are clasped; agony appears in every muscle, and in the whole contracted form. And indeed so far, I think, we may admit the mixt passions; one passion may take possession of the face, while another may actuate the limbs. We may allow, for instance, a mother to clasp her infant in her arms with all the tenderness of love; while her features are marked with terror at the soldier who strikes it with his sword. In the same way we may here allow the hands to be clasped in agony, while hope alone is seated in the face. In a word, nothing can be more strongly conceived, more thoroughly understood, more delightfully coloured, or more delicately touched, than this whole figure. I should not indeed scruple to call it the noblest specimen I have ever seen of the art of Rubens. It is all over glowing with beauties, without one defect which I was able to discover. Villages.

"But although the principal figure (on which I dwell because it is so very capital) exceeded my expectation, yet the whole of the picture, I must own, fell beneath it. The composition is good; the lions, of which there are six, with two lionesses, are well disposed, and stand round the prophet with that indifference which seems to have arisen with a satiety of food. One is yawning, another stretching, and a third lying down. An artist of inferior judgment would have made them baying at the prophet, and withheld by the Almighty from devouring him, as a butcher restrains his dog by a cord. The only fault I observed in the composition arises from the shape of the picture. The painter should have allowed himself more height, which would have removed the opening at the top to a greater distance, and have given a more dismal aspect to the inside of the den. At present the opening is rather paltry. This has induced some judges to suppose, what does not seem improbable, that the picture was not

Villages. originally painted on one great plan; but that the painter, having pleased himself with the figure of Daniel, added the appendages afterwards.

"But the great deficiency of this picture is in the distribution of light. No design could possibly be adapted to receive a better effect of it. As the light enters through a confined channel at the top, it naturally forms a *mass* in one part of the cave, which might *gradually fade away*. This is the very idea of *effect*. The shape of the mass will be formed by the objects that receive it; and if bad, they must be assisted by the artist's judgment. Of all this Rubens was aware; but he has not taken the full advantage which the circumstances of his design allowed. A grand light falls beautifully upon his principal figure; but it does not graduate sufficiently into the distant parts of the cave. The lions partake of it too much; whereas had it been more sparingly thrown upon them, and only in some prominent parts, the effect would have been better, and the grandeur and horror of the scene more striking. Terrible heads standing out of the canvas, their bodies in obscurity, would have been noble imagery, and have left the imagination room to fancy unpictured horrors. That painter does the most who gives the greatest scope to the imagination; and those are the most sublime objects which are seen in glimpses as it were—mere corruscations—half-viewless forms—and terrific tendencies to shape, which mock investigation. The mind, startled into attention, summons all her powers, dilates her capacity, and, from a baffled effort to comprehend what exceeds the limits of her embrace, shrinks back on herself with a kind of wild astonishment and severe delight. Thus Virgil, describing the gods, who, enveloped in smoke and darkness, beat down the foundations of Troy, gives us in three words (*apparent diræ faces*) more hor-

rid imagery than if he had described Jupiter, Juno, and Pallas, in a laboured detail, with all their celestial panoply; for when the mind can so far muster an image as to reduce it within a distinct outline, it may remain grand, but it ceases to be sublime. If I may venture to suggest a distinction, it then comes within the cognizance of judgement, an austere, cold faculty; whose analytic process, carrying light into every part, leaves no dark recesses for the terror of *things without a name*. Rubens, in managing his lions, has erred against these precepts: He has injudiciously showed too much. Besides, a little more shadow would have concealed his ignorance in leonine anatomy; for, it must be confessed, the lions are not only very slovenly painted, which, capital as they are, should not have been the case, but in many parts they are very ill drawn. The lioness, in particular, on the right, instead of the gaunt leonine form, has the roundness of a coach-horse. Some of the heads at the same time are admirable. I have dwelt the longer on this picture, not only as it is in itself a very noble one, but as it is esteemed the first picture in Scotland." Villages.

The late Doctor Garnet makes the following remark upon the above observation: "But I cannot by any means agree with this writer, that the lions are painted in a very slovenly manner; on the contrary, they seem to be executed in a highly finished style."

The second of the principal paintings, which we mentioned as forming the most distinguished in the collection, is that of the Earl of Denbigh. Concerning this painting the tourist already quoted, Mr Gilpin, remarks, "That the Earl of Denbigh is a masterpiece. He is dressed in a red silk jacket, and holds a gun in his hand. His hair is short and gray, and he looks up with a countenance so Denbigh of Vandyke.

Villages. full of nature and character, that you are amazed the power of colours can express life so strongly."

The painting alluded to is a portrait of Viscount Fielding, first Earl of Denbigh, whose eldest daughter was married to the then Marquis, afterwards Duke of Hamilton. In this picture the painter has combined all the energies of imagination with the reality of portrait. The Earl is represented in a loose dress, going out a-shooting. The scene is removed to a tropical climate, and characterised by the palm-tree and perroket, and he is attended by a Morisco boy. The boy is in the action of whispering and pointing out the game, and the Earl is exhibited in the moment of turning to discover it. The action is animated, the air of the head is graceful, and the countenance open and expressive. Indeed, so dignified and energetic is the expression of the head, that it is sometimes regretted he were not surrounded by a senate or followed by an army. Mr Richard Cooper, drawing-master to the royal family, made a drawing of this admirable painting above thirty years ago, for the purpose of engraving it. The design, however, was dropt; but we learn, with great pleasure, that the subject has since been taken up by Mr Beugo of Edinburgh, with the approbation of the Duke, and the countenance of the noble family of Hamilton. We understand that the plate is in considerable forwardness; and, if we may judge from report, is a work of very great promise.

In the lower part of the county, in proportion to the nearness of approach towards Glasgow, a variety of villages are to be found, supported chiefly by the manufactures, or other undertakings less or more connected with
Airdrie. that busy centre of commerce. In the parish of East Monkland is the village or town of Airdrie. It was by act of parliament, in 1695, appointed to be a market town,

with the privilege of holding a weekly market on Tues- Villages.
day, and two fairs annually on the third Tuesday of May and the first Tuesday of November, O. S. Two other fairs have been added; but the two old fairs are best frequented. It stands on a beautiful ridge between two small rivulets. It is regularly built, with wide streets. It extends almost an English mile in length from east to west. The country around it is adorned with enclosures and stripes of planting; and the surface being irregular, it is upon the whole beautiful. Indeed, from the nature of the soil in this district of the county, it is perhaps more beautiful than fertile.

The village of Dalserff stands in a low sheltered situa- Dalserff.
tion, upon the banks of the Clyde, having a large fertile valley, round which the river bends in a circular direction to the eastward. In the village is a handsome parish-church with a clock and spire. Govan, Shettleston, and various other villages, might be mentioned; but they contain nothing particularly deserving notice.

We formerly took notice, at some length, of the history Ramsay the poet.
of the poet of Airshire, and we may now remark that Lanarkshire also has had its Scottish poet, who probably stimulated the talents of Burns, instructed him by his example, and called the attention of the public to the ancient Scottish dialect, which might otherwise have become obsolete. Allan Ramsay, the son of Robert Ramsay and Alice Bower, was born at Leadhills, in the parish of Crawford, on the 15th of October 1686. It is said that the ruins of the cottage in which he was born are still pointed out to the inquisitive traveller. His father was employed in the management of Lord Hopeton's mines at Leadhills, and his grandfather Robert had enjoyed the same trust. His great-grandfather was a Captain John Ramsay, the son of Ramsay of Cockpen, and nephew to

Villages. Ramsay. Ramsay of Dalhousie. His maternal grandfather was a miner from Derbyshire, who had been invited to Leadhills. Ramsay received no other education than what the parish-school afforded. His father died in his twenty-fifth year, leaving a young widow, who speedily married a second time; and Ramsay, as soon as he reached his fifteenth year, that is, in the year 1701, was bound apprentice to a wigmaker in Edinburgh. It is not said that he was a barber. To that incorporation the wigmakers in Edinburgh do not necessarily belong. Had Ramsay exercised the kindred trade of shaving, it is probable that some of his poetical antagonists would have reminded him of that circumstance. Ramsay married in 1712 Christian Ross, the daughter of a writer in Edinburgh. He appears to have become a member of a club of Jacobites, or persons hostile to the succession of the house of Hanover and to the union; and his first poem that can now be traced is an address, in 1712, "To the most happy members of the Easy Club." In 1715, this society, which had declared Ramsay to be their poet laureate, was broke up by the tumults occasioned by the rebellion. By the rules of the club each member assumed a fictitious name. Ramsay had assumed that of Gavin Douglas; and one of the last minutes of the club declares, "That Dr Pitcairn and Gavin Douglas, having behaved themselves three years as good members of this club, were adjudged to be gentlemen." In the mean while, Ramsay had been gradually publishing his poems. They were written in the detached form of single sheets or pamphlets; so that the people of Edinburgh were accustomed to send to the booksellers shops for "Allan Ramsay's last piece." His works were so popular as to be soon piratically reprinted. Previous to the year 1718, he appears to have relinquished his employment as a wig-

maker, and to have become a bookseller, as his second edition of Christ's Kirk on the Green, published that year, is advertised as "printed for the author, at the Mercury, opposite to Niddry's Wynd." From the year 1718 to the year 1730 appears to have been the date of his most active literary exertions. In 1721 he published his poems in a quarto volume. In his preface he mentions that he had been honoured with some satires. He is said to have acquired by the publication 400 guineas, a large sum in these days, and sufficient to purchase as much land in Scotland as would now produce a tolerable income. The volume concludes with an address by the author to his book, in imitation of Horace, in which he speaks of himself with abundance of complacency: Villages]

——— Gae spread my fame,
And fix me an immortal name.
Ages to come shall thee revive,
And gar thee with new honours live;
The future critics I forsee
Shall have their notes on notes on thee;
The wits unborn shall beauties find
That never entered in my mind.

In 1724, Ramsay published the first volume of his collection of songs, called "The Tea-Table Miscellany;" and a second and third volume were published in three or four years thereafter. It speedily underwent twelve impressions. He also published the "Evergreen," a collection of old Scottish poems, many of which were scarce worth reviving.

But the chief foundation of Ramsay's fame was his "Gentle Shepherd." Indeed this work is so much superior to the greater part of his shorter productions, that for some time the fact was eagerly contested whether it was possible that he could be the author. In 1721 he had

Villages. published a pastoral under the title of "Pattie and Roger," which in 1723 was followed by a sequel, called "Jennie and Meggie." These specimens were so much approved of, that he was induced to reduce them into the dramatic form in which the Gentle Shepherd now appears. His fame speedily extended itself beyond the limits of Scotland; an edition of his poetical works was published at London in 1731, and another appeared at Dublin in 1733.

In 1726, Ramsay had removed from his shop opposite to what is at present known by the name of Niddry Street to another at the east end of the Luckenbooths. Instead of retaining his old friend Mercury, he now ornamented his sign with the heads of Drummond and Johnson. "Here," says one of his biographers, "he sold and lent books to a late period of his life; here the wits of Edinburgh used to meet for their amusement and for information. From this commodious situation Gay, a congenial poet, was wont to look out upon the Exchange in Edinburgh, in order to know persons and ascertain characters." Ramsay is said to have been the first who established a circulating library in Scotland. His collection of "Thirty Fables" was published in the year 1730; after which period he seems to have discontinued his literary efforts. In this respect, as well as in the general train of his conduct, Ramsay appears to have been a judicious and a prudent man. In his political notions he was a steady Jacobite; but he acted with such caution as to avoid any dispute with the parties that prevailed in his time. He was one of the few poets who have been equally successful in literature and ordinary trade. Even at those periods of his life when he might be supposed to be absorbed by literary efforts, he never failed to bestow due attention upon that unpoetical object, the shop. He

was caressed by many of the Scottish nobility and gentry; and lived in habits of familiar intercourse with Sir John Clerk, Sir William Bennet, and Sir Alexander Dick. The cotemporary poets, Hamilton of Bangour, and Hamilton of Gilbertfield, were among the number of his friends; and Sommerville, the author of the poem called "The Chace," has returned his poetical salutations in two epistles. Towards the close of his life he built a house of a whimsical construction, where he resided in a state of dignified retirement till the time of his death, on the 7th of January 1758. The only rash step which is known to have been adopted by Ramsay, was the erecting at his own expence the first regular theatre that ever was built in Scotland. It was ereeted in Carrubber's Close; but as the act for licensing the theatre was past during the ensuing year, the magistrates of Edinburgh commanded him to shut the house. The downfal of his establishment was beheld with satisfaction by a great majority of his fellow-citizens, who in that age regarded theatrical entertainments with great abhorrence. Villages.

Ramsay had several sons and daughters. His eldest son, Allan, was regularly educated to the profession of a painter. He attained to considerable eminence, and died in 1784. Ramsay has been quoted as an instance of poetical good fortune:

> But things may mend, and poets yet may hope,
> In better times, to charm, and thrive like Pope,
> Or Allan Ramsay, that harmonious Scot.
> Now to fare ill, is but the common lot.
>
> G. Dyer.

In a poem addressed "to Mr James Arbuckle," Ramsay gives the following account of himself:

> Imprimis, then, for tallness, I
> Am five feet and four inches high;
> A black-a-vic'd, snod, dapper fallow,
> Nor lean, nor overlaid wi' tallow;

Villages.

Wi' phiz of a Morocco cut,
Resembling a late man of wit,
Auld gabbet Spec, wha was sae cunning
To be a dummie ten years running.
Then for the fabric of my mind,
'Tis mair to mirth than grief inclin'd:
I rather choose to laugh at folly,
Than shew dislike by melancholy;
Wiel judging a sour heavy face
Is not the truest mark of grace.
I hate a drunkard or a glutton,
Yet I'm nae fae to wine and mutton:
Great tables ne'er engag'd my wishes
When crowded with o'er many dishes;
A healthfu' stomach sharply set
Prefers a back-sey pipin het.
I never could imagin't vicious
Of a fair fame to be ambitious:
Proud to be thought a comic poet,
And let a judge of numbers know it,
I court occasion thus to show it.
Second of thirdly——Pray take heed,
Ye's get a short swatch of my creed.
To follow method negatively,
Ye ken takes place of positively:
Wiel then, I'm neither Whig nor Tory,
Nor credit give to purgatory.

A letter addressed to Smibert the painter by Ramsay throws some light upon his character and conduct as a poet. It is dated, Edinburgh, May 10th, 1736.

"My dear old friend, your health and happiness are ever ane addition to my satisfaction. God make your life easy and pleasant. Half a century of years have now rowed o'er my pow, that begins now to be lyart; yet, thanks to my Author, I eat, drink, and sleep as sound as I did twenty years syne. Yes, I laugh heartily too, and find as many subjects to employ that faculty upon as ever. Fools, fops, and knaves, grow as rank as formerly; yet here and there are to be found good and worthy men, who

are an honour to human life. We have small hopes of seeing you again in our old world; then let us be virtuous, and hope to meet in heaven. My good auld wife is still my bed-fellow. My son Allan has been pursuing your science since he was a dozen years auld; was with Mr Hyffidge at London for some time about two years ago; has been since at home painting here like a Raphael; sets out for the seat of the beast beyond the Alps within a month hence, to be away about two years. I'm swear to part with him, but canna stem the current which flows from the advice of his patrons and his own inclination. I have three daughters; one of seventeen, one of sixteen, and one of twelve years old; and no ae wally dragle amang them, all fine girls. These six or seven years past I have not written a line of poetry; I e'en gave over in good time, before the coolness of fancy that attends advanced years should make me risk the reputation I had acquired. Villages.

Frae twenty-four to five and forty
My muse was neither sweer nor dorty;
My Pegasus would break his tether
E'en at the shagging of a feather,
And through ideas scour like drift,
Streaking his wings up to the lift;
Then, then my soul was in a low,
That gart my numbers safely row;
But eild and judgment 'gin to say,
Let be your sangs, and learn to pray."

The question concerning the degree of merit to be ascribed to Ramsay as a poet has been the subject to much speculative criticism. Ramsay has undoubtedly produced a great number of uninteresting pieces; and he did not possess the powerful mind of Burns, equal at once to the comic, the sublime, and the ludicrous; nor had he that force of diction which is capable of giving import- His talents.

Villages. ance to ordinary subjects. At the same time, it is certain that the popularity which his works acquired rested upon the solid foundation of their merit. His tale of the Monk and the Miller's Wife would be sufficient of itself to entitle him to celebrity as a comic poet. His songs are no doubt of a very motely character; but a variety of them, such as the Yellow-Hair'd Laddie, Farewel to Lochaber, and a variety of others, must for ever remain interesting on account of their pastoral simplicity. But his Gentle Shepherd is undoubedly that part of his works on which his most solid fame lasts. As a pastoral poem, it contains more natural truth and simplicity, and a more correct delineation of manners, than is to be found in any work of a similar nature in any language. The fable has a high degree of probability; and the dialect is at once poetical, and full of interesting sentiments. It has not had much success upon the stage; but this is easily explained: The actors who attempt to represent it are incapable of speaking the Scottish dialect in a natural manner, that is, with its proper music and emphasis. Hence, from them it appears ludicrous where it ought to be pathetic or serious. Even the excellence of the work itself is an obstacle to its effect upon the stage: the whole events and the whole dialect are simple and natural; nothing is sacrificed to the tricks of the stage, by introducing, on the one hand, bloodshed and murder, or farce and artificial surprise on the other. When the poem is perused in the closet, it has its full effect; and we are apt to be disappointed on finding that upon the stage it is inferior, as a source of amusement, to pieces of less merit. It is favourable, however, to the reputation of Ramsay, that Burns also wrote in the Scottish dialect. These two classical writers, in conjunction, have rendered it permanently interesting, and prevented it from falling into a disuse, which would

speedily have prevented the merit of the Gentle Shepherd from being understood. Religion.

Cambuslang, a parish in this county, was at one time the scene of such singular religious phenomena as to make much noise all over Scotland. They are still talked of with wonder, and exhibit the human character under an aspect which, though now less usually seen, deserves to be recorded and understood. In the year 1741, Mr M'Culloch, the minister of Cambuslang, being a popular preacher, and finding his church too small to accommodate his hearers, assumed the practice, in favourable weather, of preaching without doors from a covered wooden pulpit, or *tent* as it is called. A spot in the neighbourhood invited him to this practice; it consisted of a bank, ascending gradually in the form of an amphitheatre; the tent in which the preacher stood was placed at the foot of the bank, so that the whole congregation, seated on the bank, and looking down towards him, could see and hear him in the most perfect manner. The spot is still called the *preaching brae*, or the *conversion brae*. It was customary for the old popular clergy in Scotland to preach during a very long period from the same text. For about a year Mr M'Culloch had preached about the doctrine of regeneration. At that time the celebrated Whitefield had sent over wonderful accounts of conversions which had been made under his ministry in New England; and a variety of similar accounts were published in different quarters of England. Mr M'Culloch frequently, after sermon, read to his hearers letters, attestations, and journals, giving an account of these extraordinary operations of the Divine Spirit upon the minds of men in other countries; and, at the same time, these papers were published weekly at Glasgow, and had an extensive circulation in the neighbourhood. The result of all this was, Cambuslang conversions.

Religion. that an extreme anxiety about religious matters was produced. In the end of January 1742, a petition was presented to the minister, subscribed by ninety heads of families, at the head of whom were one Robert Bowman a weaver, and Ingram More a shoemaker, requesting, that in addition to his sermons on Sundays, he would give them a lecture on some day during the middle of the week. The minister readily complied with their request, and fixed on Thursday as most convenient. After the lecture on the two first Thursdays, several persons waited on the minister, under great anxiety about their spiritual interests; and the fervour of religious zeal, or anxiety about salvation, began to spread very widely. It is still customary among devout persons, particularly in the central and western parts of Scotland, to form themselves into clubs for prayer and religious conversation. These are called *fellowship-meetings*. On Monday the 15th of February 1742, and the two following days, all the fellowship-meetings of the parish of Cambuslang assembled in a body at the minister's house, and spent many hours in fervent prayer, that the gospel might be equally successful, and a like down-pouring of the Holy Spirit take place, in their bounds as in other places abroad. On the following Thursday, in his last prayer, the minister expressed himself thus: "Lord, who hath believed our report, and to whom is the arm of the Lord revealed? Where are the fruits of my poor labours among this people?" Instantly several persons present cried out publicly, and about fifty men and women followed the minister to his house, expressing a strong sense of their sins, and an alarming terror of damnation. After this, people from all quarters crowded to Cambuslang; and the minister thought it necessary to invite to his assistance the most eloquent of the popular clergy throughout Scotland. They readily

went thither; and daily sermons and exhortations were continued by a succession of clergymen for seven or eight months. Among the clergy who resorted to Cambuslang were many of the most distinguished and popular ministers in Scotland, whose memory is still respected by the people; such as Messrs Willison of Dundee, Webster of Edinburgh, M'Knight of Irvine, M'Laurin of Glasgow, Currie of Kinglassie, Bonner of Torphicen, Robe of Kilsyth, &c. Whitefield himself did not arrive till June. Religion.

All the converts were affected in a similar way, though in different degrees. They were seized all at once, commonly by something said in the sermons or prayers, with the most dreadful apprehensions concerning the state of their souls, insomuch that many of them could not abstain from crying out in the most public and frightful manner, "bewailing their lost and undone condition by nature; calling themselves enemies to God, and despisers of precious Christ; declaring that they were unworthy to live on the face of the earth; that they saw the mouth of hell open to receive them, and that they heard the shrieks of the damned." But the universal cry was, "What shall we do to be saved?" The agony under which they laboured was expressed, not only by words, but also by violent agitation of body; by clapping their hands and beating their breasts; by shaking and trembling; by faintings and convulsions; and sometimes by excessive bleedings at the nose. While they were in this distress, the minister often called on them, not to stifle or smother their convictions, but to encourage them; and after sermon was ended he retired with them to the manse, and frequently spent the greater part of the night with them in exhortations and prayers. Next day, before sermon began, they were brought out commonly by More and Bowman; and having napkins tied round their heads,

Religion. were placed altogether in seats before the tent, where they remained sobbing, weeping, and often crying aloud, till the service was over. Some of those who fell under conviction never were converted; but most of those who fell under it were converted in a few days, and sometimes in a few hours. In most cases their conversion was as sudden and unexpected as their conviction. They were raised all at once from the lowest depth of sorrow and distress to the highest pitch of joy and happiness, crying out with triumph and exultation, "That they had overcome the wicked one: That they had got hold of Christ, and would never let him go: That the black cloud which had hitherto concealed him from their view was now dispelled: And that they saw him, with a pen in his hand, blotting out their sins." Under these delightful impressions, some began to pray and exhort publicly, and others desired the congregation to join with them in singing a particular psalm, which they said God had commanded them to sing. From the time of their conviction to their conversion, many had no appetite for food, or inclination to sleep; and all complained of the severity of their sufferings during that interval. This singular work made much noise, and brought multitudes of people from all quarters. The sacrament was twice administered in five weeks, on the 11th of July and 15th of August. Prodigious crowds of hearers and spectators were present. Besides the tent at the foot of the bank or brae already mentioned, where the sacrament was dispensed, two other tents were erected; and Mr Whitefield, who was accustomed to see crowded audiences, supposed that at the three tents upwards of 30,000 people were assembled. There were 3000 communicants, of whom many came from Glasgow, about 200 from Edinburgh, and double the number from Airshire. On these occasions multitudes of

persons were in the utmost ecstasy of joy, which they could not contain without expressing it aloud. After the second sacrament few or none were converted; the daily sermons and exhortations ceased; and towards the approach of winter, the whole of these extraordinary appearances ended: but for many years a day was set apart in this parish for solemn thanksgiving on account of the event. Religion.

Great disputes arose throughout the country about the cause of this singular phenomenon. Two opinions were entertained: 1st, That it was a natural event, to be accounted for by a concurrence of circumstances operating upon the religious feelings and apprehensions of men. A second class of persons ascribed it to supernatural agency, though they differed widely about the nature of that agency. The moderate party in the church of Scotland, and the philosophical part of the community, satisfied themselves with saying, that Whitefield and the English methodists, together with the popular clergy in Scotland, by zealously propagating stories of conversions, and by working upon the imaginations of men, had at last succeeded in turning the heads of the people in one corner of the country; that enthusiasm is contagious; and that whoever went thither fell for the time into the same phrenzy. The Editor of this Work was informed by an old clergyman of the moderate party, who at the period alluded to was a student at the college of Glasgow, that the contagious force of religious feelings at Cambuslang seemed altogether irresistible; that he himself, and some other young men, had gone thither to amuse themselves by laughing at the weakness of the people, but that after half an hour this became impossible. The sobbings and tears of some, and the exultation and raptures of others, were so natural, and so powerful in exciting sympathy, Opinions about the Cambuslang conversions.

Religion. that it was impossible, in any other way than by leaving the place, to avoid entering into their feelings; and that, in his apprehension, it was wonderful that the same phrenzy did not become more universal.

Of those who asserted that the affair was the result of supernatural agency, there were two opinions: The popular party of the church of Scotland ascribed it to an extraordinary interference of the Divine Spirit for the salvation of a multitude of persons; but the seceders, who differed in nothing from the popular party of the established church, excepting in the excess of their zeal, and in thinking the corruptions of the times a sufficient cause to justify a schism or separation, considered the case in a very different light. Mr M'Culloch, the minister of Cambuslang, was a member of the established church; and, with the exception of Whitefield, the clergy who assisted him belonged to the church also: But the seceding clergy appear to have thought, that if it was admitted that the Divine Spirit gave direct countenance to the labours of the established clergy by a miraculous interposition, it would necessarily follow, that those who had separated themselves from the established church had acted improperly. The seceders, therefore, felt that they had no alternative than that of either condemning their own separation from the church, or of condemning the work that was going on at Cambuslang: But to have declared, like the profane philosophers of the age, that the extraordinary appearances which were there exhibited were nothing more than the natural effects of a heated imagination and of sympathetic feelings operating upon weak minds, would scarcely have proved satisfactory to their adherents, and much less have deterred them from visiting Cambuslang, and from returning to their own homes filled with the same phrenzy, which they might communicate widely through the country, and

thereby ruin the cause of the secession. The clergy among the seceders, therefore, who are supported by the voluntary contributions of their congregations, were in every point of view interested to prevent the extension of the zeal which prevailed at Cambuslang. They decried it in a style suited to the sentiments and capacity of their own adherents; they declared that the whole was the work of the Devil. This sentiment they openly avowed in their sermons, and in a multitude of publications; and especially by an act, dated Dunfermline 15th July 1742, appointing the 4th of August following to be observed in all their congregations as a day of fasting and humiliation: one of the principal grounds of which was, "The delusions of Satan attending the present awful work upon the bodies of men going on at Cambuslang." When this act was published, their ancient friends, who for many years successively had exerted their whole influence to bring them back to the bosom of the church, were filled with indignation, and even with horror. To ascribe the Cambuslang work to the influence of the Devil, appeared to them a sin little inferior in guilt to that of blasphemy against the Holy Ghost. Mr Robe affirmed, "That this act of the associate presbytery was the most heaven-daring paper which had been published by any set of men in Britain for a century past." A paper war ensued; in which the parties treated each other with abundance of freedom, but at the same time with many professions of Christian love and charity. Religion.

Nothing can demonstrate more clearly the advantage of tolerating full freedom of religious opinion, and the various modes of worship and gradations of sentiment and of sects to which toleration gives rise, than the quiet manner in which the singular transactions above mentioned at length came to a close. The sentiments which ope- Advantages of toleration.

Religion. rated at Cambuslang were so powerful in themselves, and their contagion extended so widely, that at one time it was impossible to predict how far its effects might reach, or what political direction it might have taken, if irritated by persecution, or fomented by ambitious men: but its effects were counteracted by the law of toleration; to which British statesmen, previous to that period, had wisely submitted. Hence the enthusiasm of the people was allowed quietly to exhaust itself in its own way, without interruption; while at the same time, by means of a hostile sect, a remedy was provided of a nature completely adequate and precisely adapted to the disease. The clergy of the seceders had the direction of the consciences of a great proportion of the people among whom it was most likely to spread. They encountered it, not with the unequal weapons of dispassionate reasoning, but, in its own way, with the terrors of damnation; and by ascribing it to Satan, they enlisted the piety of the people against it, and caused it to be regarded with no small degree of horror.

Population. The population of Lanarkshire is stated in the following terms in the reports to Dr Webster, in the Statistical Account of Scotland, and in the reports made out in consequence of the population act.

CATHCART CASTLE.

CATHCART CASTLE.

CRAIG NETHAN CASTLE.

LANARKSHIRE.

	Parishes.	Population in 1755.	Population in 1790-8.	Population in 1801.					
				Persons.		Occupations.			Total of Persons
				Males.	Females.	Persons employed in agriculture.	Persons employed in trades, &c.	All other Persons.	
Upper Ward.	Biggar	1098	937	555	661	156	177	883	1216
	Carluke ...	1459	1730	866	890	386	145	1225	1756
	Carmichael	899	781	403	429	317	279	236	832
	Carnwath ..	2390	3000	1297	1383	674	799	190	2680
	Carstairs ...	845	924	407	492	323	74	502	899
	Covington..	521	484	216	240	74	42	100	456
	Crawford ..	2009	1490	848	823	203	41	1427	1671
	Crawford-John ...	765	590	337	375	306	56	350	712
	Coulter	422	326	182	187	50	29	290	369
	Delphington	302	200	117	114	60	17	154	231
	Douglas ...	2009	1715	759	971	626	937	177	1730
	Dunure....	359	360	176	176	142	34	176	352
	Lammington	599	417	189	186	77	13	285	375
	Lanark....	2294	4751	2180	2512	259	1611	2822	4692
	Lesmahago	3996	2810	1560	1510	2019	351	700	3070
	Liberton...	738	750	322	384	358	104	244	706
	Pittenain...	330	386	200	230	171	41	218	430
	Symington	264	307	133	175	186	78	44	308
	Walston ...	479	427	165	218	245	84	54	383
	Wiston & Roberton	1102	740	368	389	99	76	193	757
Middle Ward.	Avondale ..	3551	3343	1722	1901	1250	1477	896	3623
	Blantyre ...	496	1040	785	966	208	947	596	1751
	Bothwell...	1561	2707	1470	1547	377	716	1924	3017
	Cambuslang	934	1288	787	771	134	289	1135	1558
	Cambusnethan....	1419	1684	888	1084	376	368	1228	1972
	Dalserff....	765	1100	—	—	—	—	—	—
	Dalzel	351	478	305	306	78	93	440	611
	Glassford ..	559	788	466	487	336	243	374	953
	Hamilton...	3815	5017	2686	3222	426	882	4600	5908
	Kilbride ...	2029	2359	1119	1211	313	327	1690	2330
	Monkland East ...	2713	3560	2184	2429	763	766	3084	4613
	Monkland Old	1813	4000	2006	2000	459	997	2550	4006
	Shotts.....	2322	2041	1007	1120	820	475	832	2127
	Stenhouse,.	823	1060	584	675	283	640	336	1259
		46031	53590	27292	43064	13549	13208	29955	57355

Parishes.		Population in 1755.	Population in 1790-8.	Population in 1801.					
				Persons.		Occupations.			
				Males	Females.	Persons employed in agriculture.	Persons employed in trade, &c.	All other Persons.	Total of Persons
Brought over ..		46031	53590	27292	43064	13549	13208	29955	57355
Under Ward.	Cadder	2396	1767	992	1128	257	227	1636	2120
	Carmunnock ..	471	570	332	368	399	362	39	700
	Govan & Gorbals	4389	9066	3277	3424	400	1314	4987	6701
	Rutherglen	9888	1860	1200	1237	270	640	1527	2437
Total of the county		54275	66853	33093	49221	14873	15751	38144	69313
City & town of Glasgow.	Barony			12717	13993	1562	4498	20650	26710
	East			2364	2889	—	1527	3726	5253
	Enoch, St.			2803	3601	—	1362	5041	6404
	Gorbals			1844	2052	—	—	—	3896
	Middle			1878	2460	—	1336	3002	4338
	North			3595	4494	269	7490	330	8089
	North-West			3159	4242	—	1201	—	7401
	South			2093	2808	—	1228	3673	4901
	South-West			2920	3674	—	2621	3973	6594
	West			1634	2165	—	1072	2725	3799
Total of Glasgow		27451	58401	35007	49378	1831	22335	43120	77385

GLASGOW.

We now proceed to the description of the city of Glasgow. Though not politically the capital of the county in which it stands, this fine city is not only the most interesting object in this part of the country, but is undoubtedly to be regarded as the great capital or centre of the manufactures and commerce of Scotland.

Glasgow stands in the Nether Ward of Lanarkshire, upon the northern bank of the river Clyde. A part of its suburbs have extended to the southern side of that river. As it is not overlooked, like Edinburgh, by any elevated grounds or precipitous rocks, it can only be seen to advantage by actually traversing its streets; the more recent of which consist of buildings reared with great elegance, and even magnificence, suited to the enterprising spirit and the opulence of the inhabitants. The latitude of Glasgow is 55° 51′ 32″ north, and its longitude 4° 15′ west from London. The Clyde here, as formerly mentioned, runs through a tract of country which upon the whole may be considered as level and low. At the place where Glasgow stands the ground gradually ascends from the brink of the river upwards to a considerable height and distance, and upon this declivity is placed the greater part of the city. The ascent terminates toward the north in a ridge, beyond which there is a trifling declivity; and beyond this the city terminates on the north in the vicinity of its Great Cathedral. The ridge now mentioned has been cut across, by the hand and operations of Nature, at two points, to allow a passage to two streams of water which descend southward to the Clyde. The stream on the east passes the High Church in a deep ravine, and

General description.

General description.

proceeding downwards crosses the eastern part of the city. It is called vulgarly the Gallowgate Burn, from its crossing the great street of that name, under a bridge called the Gallowgate Bridge. In writings it is denominated the Mollendinar Burn, no doubt from its having been used by the ancient sovereigns of the city, the archbishop and his clergy, to move the machinery of their corn-mills. The other stream, called St Enoch's Burn, which crosses the ridge near the summit of the city, runs parallel to the Mollendinar Burn. It is at a considerable distance to the westward. The banks of St Enoch's Burn are less precipitous than those of the Mollendinar or Gallowgate Burn, because the territory gradually slopes downward to the west. The access to the city from this side, therefore, is over more equal and level ground than from the eastward. The principal part of Glasgow is contained between the two burns or rivulets now mentioned on the east and west, and betwixt the ridge adjoining to the Cathedral on the north, and the river Clyde, which runs parallel to the ridge on the south.

Line of the streets.

Glasgow may be considered, in a general view, as built in the form of a cross. Two principal and very long streets cut each other at right angles, and their intersection is in some degree to be considered as the centre of the city, and is actually denominated the Cross or Market-place. The one of the principal streets runs parallel to the river from east to west; whereas the other principal street, denominated the High Street, runs north and south from the Cathedral or High Church to the river. The principal part of the city stands westward and north-westward from the intersection of the two great streets, because it is in this direction that the newest and most elegant buildings of the city, or what is called the New Town, have in a great measure been constructed. What

is called the Green of Glasgow occupies a considerable extent of territory on the south-east, while the gardens and fields belonging to the university fill a considerable space on the north-east. Between these the eastern part of the city finds itself in a consderable degree confined or limited. General description.

The most ancient part of this city is in the vicinity of the High Church or Cathedral; and the street leading from thence to the Cross and the river is still denominated, as already mentioned, the High Street of Glasgow. In the neighbourhood of the Cathedral the buildings exhibit abundant marks of antiquity, from the gloomy appearance of many of the houses, and the meanness and decayed state of the rest. Here the residences are still pointed out of the ancient prebends, and likewise the site, and only the site, of the Bishop's Castle, which was of sufficient strength to resist repeated sieges. Advancing southward from the Cathedral towards the river, at a trifling distance, is the summit of the high ridge already mentioned. This appears to have been the very centre of the ancient city. Two streets here intersect each other, forming a cross. That proceeding southward to the river is still, as already mentioned, called the High Street of Glasgow. It is crossed by another street running from east to west; the eastern part of which is called the Drygate, and the western the Rottenrow. The Rottenrow runs precisely along the summit of the ridge, and is undoubtedly the most elevated and best aired situation in Glasgow. Having been occupied, however, at an early period, and being at a distance from the river, it consists of very mean buildings. The Drygate, which is the continuation eastward of the same street, runs along the steep declivity of the Gallowgate Burn, in an irregular manner. It was at one period one of the most important streets in Glasgow. The mint belong- High Street Drygate and Rottenrow.

General description.

ing to Robert the Third stood in it; and in a lane adjoining to it is shown the house where Henry Darnley lodged during a separation from his queen, the celebrated Mary. Here she visited him, and by an apparent return of affection prevailed with him to remove to Edinburgh, where the solitary house in which he resided was speedily blown up, to conceal, as was then believed, his assassination by Bothwell, the ambitious lover of his queen. The suspicious visit of the latter to Glasgow, when joined with the succeeding catastrophe, and added to her attachment to the Romish religion, rendered Queen Mary utterly dious in the eyes of her subjects, and speedily produced the loss of her crown.

From the point at which the Drygate and Rottenrow, at their junction, intersect the High Street, the latter continues to descend southward towards the river. For some length it is extremely steep, as the descent from the ridge is at first very rapid. The buildings here still continue to demonstrate their antiquity by the rudeness of their aspect. At the bottom of the steepest part of the ascent, the High Street is crossed by the finest of all the new streets of Glasgow, called George Street. Being nearly at right angles with the High Street, it is parallel to the river, and to the principal street of Glasgow, which runs from east to west. Proceeding downward from George Street along the High Street, some new streets have been opened towards the east; and on the same side, forming a part of the High Street, are the buildings of the College or University. Here the High Street assumes a fine appearance, and the buildings towards the Cross are lofty; the descent is gradual; lanes or streets proceed on both sides towards the Mollendinar Burn on the east, or towards the New Town on the west. At the Cross the territory is

The Cross

level; and the aspect of the city, consisting of the junc- General description.
tion of four streets, with several public buildings, the whole in general supported by arcades in front, is very magnificent. The continuation of the High Street southward is denominated the Salt Market. The territory here is almost level; and an opinion has been entertained that the course of the river at one time passed near the head of it, or as high as the Cross of Glasgow, because in digging a foundation for the buildings called the Tontine, adjoining thereto on the north, a boat was found amidst a bed of sand and gravel. Proceeding down the Salt Market Street, or continuation of the High Street, besides a variety of lanes, the front-entry to which is covered, an open lane, called Prince's Street, proceeds off to the right; and afterwards a handsome street, called St Andrew Street, proceeds to the left eastward, terminating in a square, called St Andrew Square, and church. Thereafter an old street, called the Bridgegate, proceeds from the Salt Market, in a south-western direction obliquely towards the Clyde. It is very ancient, and derives its name from its forming the passage towards what is now called the Old Bridge, which in early times was the only bridge across the river. In the Salt Market, opposite to the head of the Bridgegate, a house is pointed out in which Oliver Cromwell resided during the winter which succeeded the battle of Dunbar. At some distance southward, the Mollendinar Burn, crossing the street, forms the termination of it. Beyond the rivulet, the western corner of what is called the Green of Glasgow, intervenes betwixt the lowest part of the street and the river.

Salt Market

St Andrew Square.

Having thus traced the High Street from the Cathedral or Great Church on the north downwards to its termination at the banks of the Clyde on the south, we next proceed to attend to the still more important and much longer

General description.

street, by which it is traversed at the Cross of Glasgow, and which runs from east to west. Beginning at the east on the road towards Edinburgh, a considerable length of suburbs stretches towards the country. The

Gallowgate

street is called the Gallowgate; and though its direction is towards the west, it is by no means rectilineal. The first important object is the Barracks, which were built during the late war on the northern side of the street. Thereafter, at some distance, on the south, is the principal entry to a very populous suburb called the Calton. Proceeding westward, some new streets have been opened, but which are of no great extent, such as Campbell Street, Kent Street, Suffolk Street, and Charlotte Street, containing many handsome buildings, which form a striking contrast to many of the more ancient buildings which front the principal street or Gallowgate. It may be remarked, that Charlotte Street is often vulgarly called Merk-daily, because about fifty years ago the ground on which it stands was let to a gardener at the rate of 365 merks *per annum*; a merk Scots is equal to 1s. $1\frac{1}{3}$d. Sterling. The Gallowgate thereafter descends to its lowest point, which is the bridge across the Mollendinar Burn; after which it gives off towards the left a street or passage towards St Andrew's Square, the principal entry to which, however, is that already noticed from the Salt Market by St Andrew's Street. The Gallowgate now

Trongate.

proceeds between lofty buildings towards the Cross. Here the same line of street assumes a different name, being first called the Trongate, and afterwards Argyle Street Standing at the Cross of Glasgow, the appearance of the buildings, as already mentioned, is very magnificent. This is particularly the case when the eye is directed westward along the Trongate. On the right or northern side the angle is filled by the Prison, five stories in height,

beyond which are the Townhouse and Exchange; all which have a very splendid appearance. The houses are supported, to a certain length, on both sides of the street, by Doric pillars, forming piazzas. An equestrian statue of King William the Third stands opposite to the Exchange; and at some distance is seen, on the south side of the street, the spire of the Tron Church; the whole forming a street-scene which is scarcely surpassed in any other city. Proceeding westward along the Trongate, the first great street by which it is crossed is called King Street towards the south, and Candleriggs towards the north. The former communicates with the Bridgegate, and contains some of the principal markets; the latter communicates with Bell Street, which enters it on the right, and forms the communication between it and the High Street. On the west the Candleriggs Street is connected with Wilson Street and Ingram Street, and terminates at a church called the Ram's Horn or North-West. Proceeding westward, the Trongate, after giving out different streets to the right and left, is crossed by a long street, leading from the river on the south to Ingram Street on the north. The southern part of this street is called the Stockwell; the northern part is called Glassford Street, leading to the middle of the newest buildings of the city. Westward from Stockwell and Glassford Street, the principal street of the city, leading from east to west, once more changes its name, and is called Argyle Street. It gives off towards the right or north a variety of new streets, containing uncommonly elegant buildings, particularly Virginia Street, Millar Street, Queen Street, Buchanan Street. This last, as well as Queen Street, leads northward towards Port Dundas. The houses of Millar Street and Buchanan Street are inhabited by single families from top to bottom, and have been finished with

General description.

Candleriggs.

Argyle Street.

General description.

uncommon care and elegance. On its western side, Argyle Street gives off a considerable number of streets towards the river, particularly Dunlop Street, Maxwell Street, and St Enoch's Square, containing very fine houses. Jamaica Street is the next on the same side, leading down to the quay called the Broomielaw; and opposite to Jamaica Street, on the north, is a street called Union Place, not finished, but which contains lofty and elegant buildings. Proceeding farther west, many streets have been laid out, and a considerable number of buildings erected; but they can only be considered as suburbs of the city, terminating still farther west in the populous suburbs called Anderston, Finnieston, &c. situated at the distance of about a mile and a half from the centre of the city.

New Town, George Street, &c.

On the northern side of Argyle Street and the Trongate are the buildings of the Extended Royalty or New Town of Glasgow. Of these the principal street is George Street, running from east to west parallel to Argyle Street, and crossing the High Street on the east, at some distance northward from the buildings of the University. Beyond the High Street, eastward, it is called Duke Street. Between George Street, Argyle Street, and the Trongate, the space is occupied by a succession of beautiful streets intersecting each other at right angles. Of these we have already mentioned Wilson Street, Great Glassford Street, Millar Street, Queen Street, Buchanan Street, and Ingram Street. Besides these, are Cochran Street, John Street, Glassford Street, George Square, Gordon Street, and Camperdown Place; in all of which the buildings vie with each other in the expensive and elegant manner in which they have been executed. To the northward of George Street various new streets have also been opened, under the names of Hanover Street, Frederick Street, Montrose Street, upon the declivity of

slope of the ridge on the western part of which the Rottenrow stands. General description.

It unfortunately happened that the rapid increase of the wealth of Glasgow was not entirely foreseen, and hence care was not taken, at a sufficient early period, as in Edinburgh, to form one great plan of a new town from which the whole might have derived uniformity. Hence we are under the necessity, to avoid minuteness or confusion, of passing unnoticed a variety of short but elegant streets, formed upon such plans as the proprietors of the soil judged most advantageous to their interest. Irregularity of the new buildings.

We formerly took notice of the Calton, which stands on the south side of the Gallowgate; it was anciently denominated the Black Fauld. It contains a considerable number of streets, handsomely built of brick, and not of stone, like the New Town or the principal streets of the city. It is chiefly inhabited by weavers, or other tradesmen of different denominations. To the south-east of the Calton is a new village, called Bridgetown; it is nearly half a mile in length, and derives its name from its vicinity to the bridge over the Clyde upon the road towards the borough of Rutherglen.

The part of Glasgow that stands on the southern side of the Clyde is too small to be considered in any other point of view than as a suburb of Glasgow. The oldest southern suburb, and consequently the meanest and most irregular in point of buildings, as well as the most crowded in point of population, is the village called the Gorbals of Glasgow. Its ancient name was Bridgend, from its vicinity to a bridge over the Clyde. The buildings here are very ancient. A house was here erected in 1350 for the reception of persons affected by the dreadful Asiatic distemper called the *leprosy*, which at that period cruelly assailed the population of Europe; as the pestilence and Gorbals.

General description.

the small-pox, proceeding from the same region, did at a later period. George Elphinston, merchant in Glasgow, in 1571, acquired the territory here, not then built upon, from Archbishop Porterfield. On the east side of the village of Gorbals is an ancient building called St Ninian's Chapel; the lower part of which is at present occupied as a parish school, and the upper stories as a prison. It has the letters S. G. E. inscribed upon various parts of it. These are supposed to be the initial letters of the name of the founder, Sir George Elphinston. The lands adjoining to the Gorbals were, previous to the restoration, purchased by the town-council, the trades-house, and the trustees for Hutcheson's Hospital in Glasgow. These bodies, in the year 1790, divided their property. The jurisdiction was given to the town-council of Glasgow, with a certain portion of the lands, while the rest of the territory was allotted to Hutcheson's Hospital and the trades-house. On the territory adjoining to the Gorbals, on the southern side of the Clyde, which is altogether level, a regular town has been formed, consisting of right-lined new streets. To the eastward of the Gorbals the new streets have been denominated Hutcheson Town, from the hospital which feued out the lands. This village was begun in the year 1794, upon a regular plan, and laid out into a number of right-lined streets. Some of these are already completed, with houses from two to three or four stories in height, well built, and covered with slate.

Hutcheson town, &c.

On the western side of the old village of Gorbals, a considerable extent of territory has also been laid out upon a regular plan for buildings. That part nearest the old village is yet incomplete; it is denominated Lauriston. The street next the river is called Carleton Place, and consists of houses raised upon a terrace which overlooks the wa-

Lauriston.

ter. The buildings are uncommonly beautiful. West- General description.
ward from Lauriston the buildings are denominated Tradestown, in consequence of the ground having fallen to the trades-house of Glasgow when the Gorbals were divided, and from the ground having been feued out by that incorporation.

Besides these there are some other villages which we ac- Adjacent villages.
count it unnecessary to notice particularly; such as Camlachie, on the road to Hamilton, Edinburgh, &c. chiefly inhabited by colliers employed in the mines which are wrought in the immediate vicinity of Glasgow; and Port Dundas, at the termination of the great canal between Forth and Clyde, which will be described when we come to take notice of that important work by which the German Ocean is now connected with the Atlantic. Neither have we thought it necessary to take notice of the village called Cowcaddans, to the northward of the city; nor these denominated Graham's Town and Brownfield, betwixt the western part of Argyle Street and Anderston; although they may with propriety be considered as suburbs of the city of Glasgow.

What is termed the Green of Glasgow is a considerable The Green
tract of open territory to the south-west of the city, upon the banks of the Clyde, which may with propriety be regarded as extremely valuable, considered as a place of exercise, and where the free air may at all times be enjoyed in the neighbourhood of a busy, commercial, and manufacturing, and consequently laborious city. It consists of three parts. That to the northward, and most distant from the Clyde, is called the Calton Green. It rests upon a declivity, with a southern aspect, looking towards the river, and is divided from the rest of the Green by a very trifling brook or rivulet. What is called Glasgow Green, adjoining to the Clyde, consists of two parts; the

General description.

Low Green, near the foot of the Salt Market, is not much elevated above the level of the river, but consists of a plain of about five hundred yards in length. At the eastern extremity of the Low Green the territory suddenly rises, and thereafter proceeds in a level tract, as formerly, divided on the north from the Calton Green by a sudden declivity. Here on Sundays and holidays the citizens are seen in great crowds wandering upon the banks of the river. Adjoining to the High Green the river is very deep, and rolls slowly over a muddy bottom. Here, however, on account of the slowness of the current, and the retiredness of the situation, many young persons are induced to engage in the exercise of swimming; and here very considerable numbers of lives have been lost. It is said that the muddy bottom of the river is of a stiff and adhesive or clayey quality; and towards the banks, if the swimmer drop his feet and suffer them to be entangled in it, he is apt to be drawn farther down by every attempt to extricate himself. On account of numerous accidents which happened at this place, called Peat Bog, the Humane Society have established near it a hut, with the proper apparatus accounted necessary for the recovery of persons who have been half drowned.

The river.

One of the most important objects connected with this city undoubtedly is the river. Although it contains a large stream of water, and the declivity to the Frith of Clyde is very trifling, yet in consequence of the softness of the soil through which the Clyde here runs, it naturally spreads itself to a great breadth, which is productive of a degree of shallowness inconsistent with navigation. Hence, tho' the spring tides flow above the city almost to the distance of four miles, yet in former times the river was navigable to Glasgow by very trifling vessels. This inconvenience was much felt by the inhabitants, and many

proposals were made to have it remedied. As far back as the reign of Queen Mary, it is reported that many hundreds of the citizens of Glasgow, in conjunction with the inhabitants of Renfrew and Dunbarton, under the inspection of officers appointed by the magistrates, lived for six weeks by turns in tents and huts about thirteen miles below Glasgow, endeavouring to remove the obstruction of the river at Dumbuck Ford. These efforts, however, being unskilfully directed only towards the removing of banks of sand or mud which the floods of the river had occasionally brought down, without attempting to narrow the channel by a strong and permanent embankment, were unsuccessful. About the middle of the late century, after a variety of surveys, a resolution was adopted to render the river navigable for large vessels by means of locks; and an act of parliament sanctioning the measure was obtained in 1759. The plan, however, encountered many obstacles, and was at length dropt. At last, in 1771, another act was obtained for improving the navigation of the river, by deepening its bed, and strengthening the channel by means of jetties on the sides of it. To defray the expence of the operation, a duty of 8d. *per* ton on coals, and 1s. *per* ton on goods or merchandise conveyed from Dumbuck Ford to the city was imposed. The magistrates of Glasgow, to carry that act into execution, entered into an agreement with Mr John Golbourne, of the city of Chester, who engaged to deepen the channel of the river seven feet at the quay of the Broomielaw, even in neep tides. His contract he accordingly executed, to the great improvement of the navigation of the river, which before would scarcely admit vessels of thirty tons, whereas lighters of seventy tons now approach the Quay with ease.

General description.

Attempts to deepen the river.

For the conveniency of the city, above what is called

General description.

the Broomielaw or Quay upon the river are three bridges. Two of these are of stone, and a third of wood, erected after an unsuccessful attempt to rear a stone-bridge. The

The Old Bridge.

The old bridge opposite to the street called Stockwell, and which is connected with the foot of the High Street, or rather of the Salt Market Street, by the Bridgegate, was erected in 1350 by William Rae bishop of Glasgow. Before that period a wooden bridge had existed at the same spot. The village of Gorbals stands at the southern extremity of this ancient bridge; and it is probable that this bridge contributed considerably to the extension of the city from its original situation near the Cathedral towards this quarter. It is certain that in 1350 the street called Bridgegate was in existence, and was held under a Lady Lochow, daughter of Robert Duke of Albany, and grandmother to the first Earl of Argyle. It is worthy of notice, that Lady Lochow requested the bishop to permit her to contribute towards the public-spirited undertaking of erecting this bridge; and accordingly she was at the expence of building one of the middle arches of it. The bridge originally consisted of eight arches, two of which are now filled up. It had a gateway on the end nearest the Gorbals, that is on the south, which has been taken down to widen the communication. The bust or statue of Lady Lochow is said to have stood upon the arch built at her expence, but it has been long removed. This bridge continued long without repair, till in 1671 its southern arch fell on the 7th of July during Glasgow fair. No mischief happened, although it had been on that day crowded with passengers. It was repaired, and afterwards its breadth was increased by the addition of several feet towards its eastern side.

The New Bridge.

The New Bridge stands immediately above the Quay or Broomielaw, upon the same line with Jamaica Street

on the north, and the division between Tradestown and Lauriston on the south. It was begun to be built in 1768, and cost nearly L.9000. It consists of seven arches, and is about 500 feet in length, and 32 in breadth. Over the centre of each of the pillars between the arches is a small circular arch. These give a very light appearance to the bridge; and by allowing a free passage to the waters of the river when in flood, contribute to the security of the fabric. General description.

A third stone-bridge has unsuccessfully been attempted to be erected above the two former. The river Clyde, in consequence of the loftiness of the mountainous tract in which it has its source, is liable to sudden inundations. Two of these, of a very remarkable nature, have occurred in our own times. On Monday the 1st of March 1782, after some days of snow and rain, the river towards the afternoon suddenly began to swell; before ten o'clock in the evening the waters covered the Low Green, interrupted the communication with the bridges, and flowed into the street called the Bridgegate to the depth of one or two feet. "As * the inhabitants of that street had been frequently accustomed to inundations of the river, they quietly allowed themselves to be surrounded by the water, thinking that during the night it would subside as usual; and in this opinion many of them went to bed. Instead of decreasing, the flood increased; and the fears of the suffering inhabitants were at last seriously roused, when they perceived the waters getting higher than they had ever witnessed them, by flooding their ground apartments several feet deep, extinguishing their fires, and at last entering those very beds where a few hours before many had laid down to rest. By day their situation would have Inundations of Clyde.

* See Denholm's History of Glasgow.

General description.

been thought to be particularly afflicting; but how much more was it now, in a dark and gloomy night, when they found themselves partly immersed and surrounded on all sides by water, and in those very places where they had promised themselves security. To fly at this time from the presence of the calamity was impossible, as the water in the street, from its depth and current, would have frustrated the attempt, by at once sacrificing those lives which in another situation it so dreadfully threatened. Nothing was now to be heard but the cries of despair and the most pitiful exclamations for help, uttered by the old as well as the young. Day at length approached, and hoped-for relief was at hand from the exertions of their fellow-citizens. By seven o'clock of the morning of Tuesday the flood began to abate, to the infinite satisfaction of the sufferers, as well as the other inhabitants, who had it now in their power to administer that relief which before was impracticable. Boats were accordingly sent up and down the streets, loaded with provisions, to furnish such as stood in need, and for the purpose of bringing off others whose fears cautioned them against staying longer in their houses. Independent of this scene of misery, which pressed so hard upon the inhabitants of this particular quarter, the river, when viewed from another point of view, exhibited a most terrific and threatening appearance; for not only was the whole of the Bridgegate overflowed, but also the lower part of the Salt Market, Stockwell, and Jamaica Street, as well as the village of Gorbals, which appeared as an island in the middle of an estuary. The current of the river was besides so exceedingly rapid and strong, that not only were the greatest trees borne along like straws upon its stream, but had it continued in such a situation to increase a few hours longer, the two bridges must have fallen a sacrifice to its fury.

Luckily this did not take place; as the Clyde, after having attained fully the height of *twenty feet above its ordinary level*, began to fall, and by Wednesday immediately following it was again confined to its ordinary channel." Very considerable damage was sustained by this flood, consisting of tobacco, sugar, and other merchandise, which were destroyed or damaged by the stream. Many cows and horses, that could not be removed from their stables, were drowned; but it does not appear that any human life was lost, excepting that of one young woman in the Gorbals. The precise height to which the waters rose is marked on the wall of a house on the east side of Salt Market Street. General description.

About thirteen years thereafter, the inhabitants of Glasgow experienced a similar alarm from the river. In the year 1794 the resolution was adopted of feuing out for buildings the territory already mentioned on the south side of the river, called Hutcheson Town. To give a direct communication between the intended buildings and the city, it was resolved that a third stone-bridge should be erected over the Clyde, opposite to the foot of Salt Market Street; that is, in a line with the High Street of Glasgow. Accordingly, on the 18th of June of that year, the foundation-stone of the intended bridge was laid by the provost and other magistrates of Glasgow, in presence of a crowd of spectators; and the work was vigorously carried on: But on the 18th of November the Clyde rose to a great height, and "inundated the lower parts of the city nearly as much as it had done in that memorable flood on the 12th day of March 1782; like to that then, the swelling of the river now was occasioned by a very severe storm of wind, rain, and snow, which commenced upon Tuesday the 17th, and continued almost without intermission till the following Wednesday in the afternoon. A third bridge founded, but destroyed.

General description.

About the middle of that day, the current was so strong as to shake the piers of the newly erected bridge opposite the foot of the Salt-Market Street; and in consequence, two of the arches immediately gave way, and with a tremendous crash fell into the river. The concussion of the water occasioned by this cause was almost irresistible; the doors of the washinghouse, though situated at a considerable distance, were burst open, and a great quantity of clothes and utensils carried off by the impetuous stream. In the afternoon the three remaining arches of the bridge shared the same fate with the others; and thus, in the compass of a few hours, that edifice, which had been nearly a year and a half in erecting, was completely destroyed. At this time the Bridgegate, the lower parts of the Salt Market, Stockwell, Jamaica Street, and the village of Gorbals, were all under water to the depth of several feet, while boats were plying up and down the streets, administering relief to such as were in danger. On Friday morning the river was again confined to its ordinary channel; and till Saturday hopes were entertained that the violence of the storm was over. However, on that day it began to snow and rain afresh, and with such violence that the Clyde quickly rose, and twice in the compass of one week overflowed the lower part of the city. On Sunday the waters appeared to be retiring, and by Monday afternoon the inundation was completely over." No farther attempt has been made to rebuild this bridge with stone; but a temporary fabric of timber was erected, and a proposal has been made to rear upon this spot a bridge of cast iron.

The city of Glasgow, which we have thus generally described, contains a vast multitude of beautiful private buildings erected of hewn stone, and in the finest style. At the same time, as these are in a less degree set aloof

upon a particular spot, and separated from the ancient buildings, than occurs with regard to the New Town of Edinburgh, their appearance is not that of a great effort of the community, but rather of individual riches. At the same time these very circumstances, that is, the position of the new buildings in the nearer vicinity of the old, their situation on different sides of the Clyde, and their separation from each other by ancient buildings, probably operate as a matter of convenience in a commercial and manufacturing city, where most persons are engaged in the pursuits of active life. It also gives to the city an aspect of greater extent and variety to the eye of a stranger. All the streets are well paved with blue basaltic stone or whin-stone, universally used for that purpose in Scotland. Besides this sort of pavement, which is called the *causeway*, and occupies the centre of the street, intended for the use of wheeled carriages and horses, all the principal streets of the ancient part of the city, and the whole streets which have been more recently built, are furnished with a spacious side-pavement for the use of foot-passengers, consisting of great flat free-stones accurately jointed together. The town is at all times well lighted, and the streets preserved in the best order. General description.

The climate of Glasgow, like that of the whole island, is very variable. Standing at the lower extremity of the county, and near the isthmus, or narrow part of the island, which divides the Frith of Forth from that of Clyde, without being divided from either by a very elevated country, the weather ought naturally to be very irregular. Upon the whole, however, it chiefly partakes of the character of the climate of the west of Scotland; that is, it is moist and rainy, and the face of the sky is often obscured by the clouds which float along from the Atlantic. The winter, from the same cause, usually comes attended with less Climate.

General description.

continued or intense frosts than is usual in the eastern districts of the island; but in return, both in summer and winter, there is more wet and unsteady weather. The south-west winds blow here about two-thirds of the year. A part of the clouds which they waft from the broad surface of the Atlantic are intercepted by the high grounds which divide Airshire from Renfrewshire and Clydesdale; but still enough remain to diminish at Glasgow the intenseness of the summer's heat by frequent clouds and showers, as well as to mitigate the severity of winter. The next in frequency to the south-west wind is the north-east, which for the most part is accompanied with fair weather. The rain which is the heaviest and most lasting, but not the most frequent, is from the south-east. The wind seldom blows long from the south without bringing rain; and this rain is heavy, but of short continuance. The rain from the west and south-west comes in repeated showers between short intervals of fair weather; and the greatest quantity of rain here comes from the latter, which, as the wind blows much from that quarter in the beginning of the year, drenches the ground greatly at that part of the season. Rains from the north-west, north, and north-east, are neither frequent nor heavy, but sullen and unnourishing. The north-east wind is most frequent in the months of April and May; it sometimes, however sets in during the month of March.

Much more rain falls annually at Greenock than at Glasgow, and more at Glasgow than farther up the country at Hamilton and Lanark. Notwithstanding the moisture of the climate, Glasgow is a healthy residence; and longevity is as frequent here as elsewhere. The unsteadiness of our climate seems in all quarters of the country to operate as a powerful means of preventing the existence or diffusion of contagious disease, and to remove

the bad effects otherwise attendant upon a moist atmosphere. General description.

It is a singular circumstance, that although Glasgow stands upon a navigable river, and is inhabited by a race of men whose enterprising spirit does not yield to that found anywhere else in the British islands, yet it is very defectively supplied with water, both in point of quantity and quality. In consequence of the variety of mineral strata with which this part of the country is enriched, it necessarily happens that most of the springs, whether rising spontaneously to the surface, or reached by digging wells, contain a certain degree of mineral impregnation. Yet it is only from wells or springs within its own boundary that this great city is supplied with water; most of the springs contain selenite in a greater or less proportion, rendering their water what is commonly denominated *hard*; in which soap cannot be brought into solution, because the alkali of the soap, uniting with the acid contained in the water, and its oil, uniting with the earthy substance, forms an insoluble compound that floats upon the surface of the water. On account of the numerous strata of iron-stone found in the territory here, many springs contain iron; and indeed the water, flowing spontaneously from the soil in most parts of the neighbourhood, forms a spontaneous depositation of ochre or calx of iron. The iron is usually suspended in the water by carbonic acid. In the Green of Glasgow, however, is a well, called the *Arn's Well*, of good quality. As it stands near the Clyde, and consequently below the city, its water cannot be conducted thither in pipes, and would at all events be insufficient for general consumption; but great numbers of families in the lower part of the city occasionally supply themselves with water from thence. It appears, that towards the western quarter of the city the water is more pure than Water.

General description.

towards the east; and from one well, called the West Port Well, which is the best and most abundant spring yet discovered, nearly 6000 gallons are supposed to be drawn daily. Many proposals have been made for supplying the city with water of better quality and in more abundance. In particular, springs have been pointed out in the parishes of East Monkland and of Shotts, from which it has been thought that a sufficient supply might be obtained by laying pipes, as has been done for the supply of Edinburgh and many other towns. It has also been suggested, that by means of a steam-engine, or other machinery, an abundant supply might at all times be obtained by forcing up the waters of the Clyde to a sufficient height; or an aqueduct or pipes might be brought from the same river, commencing at some distance upwards. But none of these projects have hitherto been carried into execution.

If Glasgow be ill supplied with water, it at least enjoys a complete command of the opposite and scarcely less necessary element of fire. It stands, as already mentioned, in the centre of a great coal-field; and that valuable mineral is brought to the surface in various quarters around it, and even in its suburbs, particularly at Camlachie. To this abundance of fuel, together with its navigable river, does Glasgow in all probability owe its magnitude and importance; an importance which is rapidly increasing, and every year rendering this great city more extensive and magnificent.

Manners.

With regard to the manners and character of the inhabitants of this populous city, consisting as it does of very various classes of persons, in point of occupation, education, and riches, it would be improper to lay down any general position; because such positions, when applied to such a city, must always prove incorrect. In general, it may be observed, that being at once the seat

of an university which is well attended, and a great commercial and manufacturing town, it exhibits that happy mixture of enlightened, and speculative, and enterprising, and active men, which in all probability affords the happiest aspect of human society. It may be remarked, however, that as this is the great commercial capital of the west of Scotland, and the centre of its mercantile speculations and efforts, the busy and active character predominates. This tendency is augmented by the circumstance, that Edinburgh being considered as the fashionable capital of the kingdom, when a fortune is made in Glasgow by a great merchant or manufacturer, his son or other successor is apt to retire to Edinburgh, in pursuit of pleasure, and to obtain an opportunity of displaying his wealth in the principal seat of luxury and ostentation. As the leading men in society in Glasgow are engaged in different departments of business, they naturally influence in some degree the manners of the whole. Hence, while in Edinburgh, young men, imitating the manners of their superiors, are apt to assume the appearance of lounging and idleness; in Glasgow they more frequently endeavour to seem extremely busy, and distressed by an extensive correspondence, or the management of a multiplicity of affairs. General description.

As the rise of Glasgow has been very rapid, its inhabitants have not yet entirely lost the sentiment usually found among those who reside in small towns, of a great fondness for their own town, and a patriotic zeal for its respectability, and for the fame of whatever is connected with it. Hence the people of Glasgow seem much more anxious than those of the more ancient city of Edinburgh, to exhibit to strangers their public buildings and the beauties of their city, and are much more anxious that it should obtain applause. When the enumeration of the

General description.

people was going on under the population-act, while the inhabitants of more ancient towns were perfectly indifferent about the matter, and either suffered it to be conducted in the most slovenly way, or even concealed their numbers, to avoid the inconvenience of militia levies and other public burdens, the leading inhabitants of Glasgow displayed a very pointed anxiety that no defect in the enumeration of their people should take place, and that their town should be reputed extremely populous and extensive.

Character and temper of the people.

Glasgow and its suburbs contain a vast body of people employed in weaving and in other branches of industry connected with manufactures and commerce. Among such a body of common people a mixture of character must necessarily prevail. Happily, however, the decent, sober, and religious character of the south-west of Scotland greatly predominates; and this character appears in a considerable degree in all ranks of persons hitherto unsubdued by the luxury of the times or the pursuit of wealth.

In this great city, and the different towns of Paisley, Greenock, Port Glasgow, and others connected with it, a singular change or variety is at times seen in the spirit and temper of the people, which to persons unacquainted with the vicissitudes of prosperity and adversity attending commercial pursuits seems almost unaccountable. At one time, a stranger entering Glasgow finds its inhabitants full of spirit and intrepidity, possessing a boundless command of riches, and setting no limit to their enterprises; the poor man finds his wages rising, and has the choice of an endless variety of employers, all of whom are eagerly flattering and bribing him to engage in their service; the manufacturer or merchant, full of ardour and hope, finds his profits immense and his credit vast;

and the whole city exhibits a scene of the most ardent industry, activity, and happiness: But let the same stranger enter Glasgow at another period, and excepting the figure of the streets, and the walls of the buildings, he will see nothing the same; every countenance is cast down, and despondency and unhappiness appear to cover the whole community; the manufacturer finds the goods he has prepared of no price or value, and must dismiss nearly the whole servants in his employment; the merchant is at a stand, and knows not whom to trust; great bankruptcies have happened, or are hourly expected; the banks can venture to give out little or no money; the poor man can find no employment whereby to earn bread for his family; one half of the men of mature age are under the necessity of enlisting as common soldiers *; and the whole city seems overwhelmed with sadness and mourning. General description.

The cause of these singular and important changes in the state of mens minds and prospects in this commercial city sometimes consists of political events connected with the general history of the British empire, and sometimes of events which seem to arise out of the nature of commerce itself. Thus, previous to the unfortunate war with the Anglo-Americans, which terminated in the permanent political separation of the race of men by whom the English language is spoken, the merchants of Glasgow were accustomed to send out factors to the North American colonies, who, on the one hand, sold the manufactures of the west of Scotland, and, on the other hand, purchased for their constituents the produce of the colonies. This traffic was carried to an immense extent, and proved the Remarks on commerce.

* It is said that in the years 1793 and 1794 upwards of 10,000 men enlisted as soldiers at Glasgow.—See Broughan on the Colonial Policy of the European Nations.

General description.

source of great riches to Glasgow. In the year preceding the war, the merchants of Glasgow imported of tobacco alone from Virginia, Maryland, and Carolina, no less than 57,143 hogsheads, being far above one-half of the whole quantity imported into Great Britain; but the commencement of the war with the colonies suddenly put an end to all commercial intercourse with them, and proved a dreadful stroke to the city of Glasgow. The colonists owed immense sums to the merchants of this city. These debts being lost in an instant, men who had previously with some reason considered themselves as possessed of great opulence, were suddenly reduced to bankruptcy and ruin; and the whole city and the neighbouring manufacturing districts felt themselves involved in the calamity.

In like manner, after Mr Pitt's commercial treaty had introduced the British manufactures into France, when the war of the revolution put a stop to the immense demand for goods from that country, great calamities were experienced, and every man's enterprises or views were brought to a stand. Afterwards, however, the demands of the state for articles requisite for the army, together with the channel to the continental market, which was opened through Hamburgh and other quarters, restored the demand for the productions of this manufacturing city, and enlivened its commerce; but on the unexpected return of peace during the administration of Mr Addington, the delusive hope of a restoration of the French market put an end to the traffic thro' Hamburgh; while the termination of the demands of the state occurring at the same instant, rendered the return of peace a period of misfortune to this great trading community. It became necessary to find out a new market for goods; and, in the mean while, the adventurer, possessing little credit or capital, but who had previously entered into a short career of prosperity, was ruin-

ed. The wealthier merchants being at a stand, suspended their operations for a time; and the ordinary tradesman or artizan, who depended for subsistence upon the payment of his daily labour, experienced severe distress. General description.

Besides the vicissitudes of good and bad fortune which occur to manufacturers and merchants in consequence of the quarrels of princes, and the great changes which take place in the history of nations, there would seem to be something in the nature of commerce itself which leads periodically to embarrassment and distress. When any branch of manufacture proves prosperous, or when the exportation of goods to a particular country proves profitable, adventurers instantly crowd into the train of employment which they see crowned with success. The bankers, who are a set of men that derive profit from lending money, finding the merchants and manufacturers prosperous, are led to augment their own traffic by augmenting the extent of the accommodation which they bestow. This circumstance affords an additional temptation to the traders and manufacturers to pursue their speculations with unbounded eagerness. The first profits of every enterprising adventurer, instead of being considered as a capital to yield an established income, are expended, with as much more as the credit of these profits will procure, in extending his speculations. Thus a man who has gained L. 20,000 by spinning cotton-yarn with machinery, instantly builds another mill of double the extent, and expends L. 40,000, that is, twice as much as he is worth, in the speculation. Hence, instead of becoming easy, and attaining to comfort and a competency by his success, his growing avarice or ambition only involves him in more extensive enterprises, and more involved transactions. At length, from these immense undertakings, the market is overstocked, goods are found to have

General description.

been produced in far greater abundance than is necessary to supply the demand; the consequence of which is, that they can no longer be profitably sold, while, at the same time, an enormous quantity remains in the warehouses of the merchants or great manufacturers. As every man has expended his whole capital in his enterprises, and stretched his credit to the utmost, some individual is speedily under the necessity of selling his goods for what they will bring. This sinks the value of the commodity; and men possessed of immense quantities of it, find their property becoming in their hands like debased coin, which brings only a trifling price; they are unable, therefore, by sales, to make regular payments of the purchases they have made. Bankruptcies commence. The bankers or money-lenders, ever watchful of the conduct of their debtors, the merchants and manufacturers, instantly take the alarm, and refuse farther accommodation; the whole commercial community becomes involved in embarrassment, confusion, and insolvency. The branches of business which are still prosperous cannot be carried on, because it is not known how far the ostensible conductors of them may not be connected with those departments of trade which have brought ruin upon those employed in them. The convulsion reaches in its effects the humble cottages of the remotest villages, because there the loom and the spinning wheel had been employed in the service, and their payment depended upon the prosperity of the opulent manufacturer, whose misfortunes thus spread calamity far and wide.

Still, however, it has been the good fortune of Glasgow, that no evil or reaction which it has experienced has ever brought matters back to the point at which its improvement commenced; and the accumulation of wealth during times of prosperity has always been far greater than

the losses which it suffered from the interruption of its trade by political events, or from the embarrassment produced by the excess of those efforts which have proved the source of its prosperity. After a short period of perplexity and distress, it has always recommenced its progress from a more advanced station than that at which its career began; and notwithstanding the misfortunes of individuals, and the anxieties of all, the commercial community has proceeded in a steady march towards the acquisition of immense opulence. General description.

We should interrupt too much our description of the objects worthy of notice in this beautiful city were we here to pursue farther these general remarks. We shall take the liberty, however, to resume the subject at the close of our descriptive and historical account of it. In the mean while, we shall arrange our remaining observations upon the most important buildings and institutions of Glasgow, as nearly as possible, under the same heads as we formerly did when treating of the city of Edinburgh: that is, we shall consider its establishments, *first*, For the support of religion; *secondly*, For literature; *thirdly*, The charitable institutions which it contains; *fourthly*, The establishments for public amusement; *fifthly*, The municipal institutions of the city; *sixthly*, Its commerce and manufactures; and, *seventhly*, Its population. We shall conclude the whole with a very concise view of the history of Glasgow. Arrangement.

RELIGIOUS ESTABLISHMENTS OF GLASGOW.

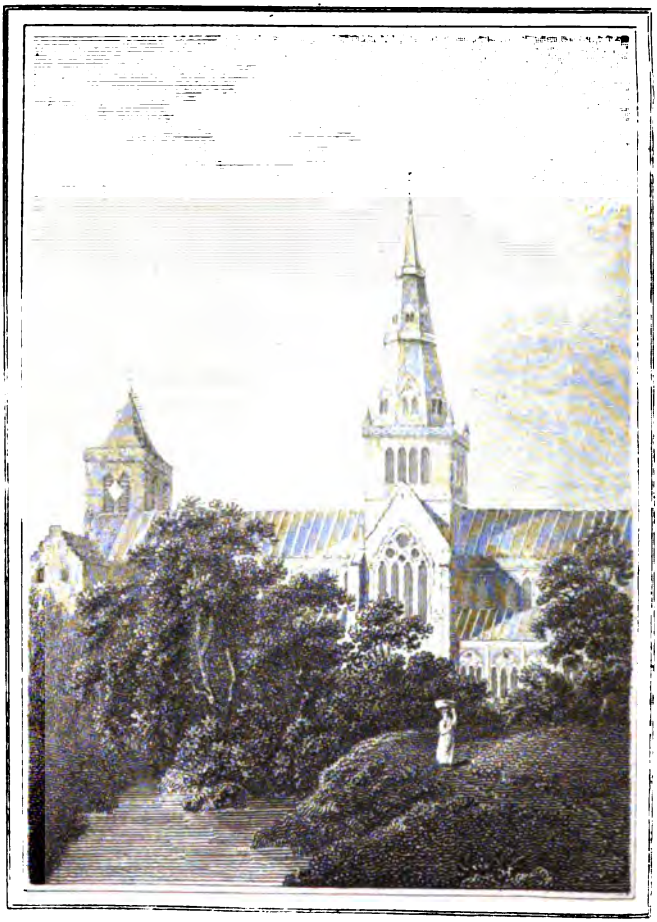
WHEN the reformation from popery took place, the Scottish reformers did not at once so far surmount their whole prejudices as instantly to pass from the catholic hierarchy to the system of complete presbyterian equality

Religious establishments.

which was afterwards established among the clergy. The kingdom was at first divided into districts, over each of which a superintendant of the clergy was placed; the superintendant of the west of Scotland, at the same time, acted as the officiating clergyman of Glasgow. He was assisted in his labours in the parish of Glasgow by a very numerous kirk-session, consisting, in 1583, of no less than sixty-one laymen; thirty-five of whom were denominated *elders*, and twenty-six were called *deacons*. In proportion as the reformed clergy became more numerous, Glasgow and its neighbourhood came to be considered as too extensive for the labours of a single clergyman; it was therefore divided, in 1595, into two parts. An extensive tract of territory around the city, now containing many populous villages and suburbs, was formed into one parish, called the Barony, while the city itself became a separate parish; but the city has ultimately been divided into eight parishes, called, from the places of performing divine service, the Inner High Church, the Outer High Church, the Tron Church, the College Church, the Wynd Church, the North-west Church, St Andrew's Church, and St Enoch's Church, each of which has a separate clergyman, and each of them has a separate kirk-session: But it appears that in some respects the city, exclusive of the Barony and Gorbals, is still considered as one great parish, for the members of all the particular sessions assemble together on the first Thursday of every month, in one general session, for the discussion of whatever relates to religious order in the city, or the administration of the funds allotted to the support of the poor, whether arising from the public collections at the churches, or from other charitable donations.

Number of parishes.

In considering the religious establishments of Glasgow,



GLASGOW CATHEDRAL.

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the Cathedral or High Church necessarily takes the lead. It is undoubtedly the most entire specimen of ancient Gothic architecture in Scotland. The see of Glasgow is said to have been founded about the year 560, by St Mungo or Kentigern, who was the first bishop. The Cathedral itself was founded in the year 1123, by John Achaius bishop of Glasgow; it was consecrated in the year 1136 in presence of David the First, king of Scotland, and dedicated to St Kentigern or to St Mungo. The legendary history of St Kentigern is this: He was the natural son of Eugenius the Third, king of the Scots, and a daughter of Lothus king of the Picts. His mother Thamit, when near the time of her delivery, in order to conceal her shame, threw herself into an open boat, with a view to its being cast away; and after being for some time tossed about the Firth of Forth, was driven ashore near the east end of the town of Culross, where the remains of a chapel dedicated to St Mungo are still to be seen, and where the frail Pictish princess brought forth her son. St Mungo was educated at Culross, under the tuition of Servanus or St Serff, who lived there in a hermitage. The story of St Serff, the tutor of St Mungo, is abundantly singular, as given in the Lochleven Chronicle. St Serff was son to the King of Canaan, and resigned his paternal inheritance to a younger brother that he might be at liberty to travel. About the time of the death of Pope John the Third, A. D. 511, he came to Rome, and according to the legend was raised to the papacy, which he held seven years. This Pinkerton thinks to be a fable, and gives it as his opinion that St Serff was a native of Italy. Setting out from Rome, and travelling through France, he arrived at the shore opposite to Britain, where he embarked with his retinue of 100 men, and after a prosperous voyage arrived at the island of Inchkeith between Leith and Kinghorn. There

Religious establishments.

Cathedral.

St Mungo or Kentigern.

St Serff.

Religious establishments.

he was visited by St Adaman, the abbot of Icolmkill, and entreated to come to Fife. In compliance with the holy man's request he left Inchkeith and arrived at Dysart, and proceeding from thence by water, came to Kinnoul. There he cast his rod upon the water, and it instantly became a large apple-tree bearing abundance of fruit. Having performed this miracle, St Serff passed over to Culross, intending to found a church; but he was opposed by Brude, at that time king of the Picts. Brude being seized by a severe illness, was restored to health by the prayers of St Serff, and made the holy man a grant of the lands of Culross; and in the words of the Chronicle,

> Their first Sanct Serf took his resit
> To lif on that as he might get,
> And there he brought up Sanct Mungow
> That syne was bishop of Glasgow;
> Syne fre Culross he past eyra
> To the Inch of Lochleven.
> The King Brude of devocion
> Mad till Sanct Serf donation
> Of that Inch, and he dwelt thair
> Till seven years our passit were.

St Serff moreover performed many wonderful miracles, beat the Devil at a disputation, and at length died at Culross.

According to Spottiswood, St Mungo, while under the charge of Servanus, "gave tokens of his rare piety, for he was in prayer more frequent than young ones are seen to be, of a spare diet, and so compassionate to the poor that he distributed all that came into his hands amongst them. Servanus loving him beyond others, was ordinarily wont to call him *Monagh*, which signifies *dear friend*. After his tutor's death, St Kentigern went into Wales, where he founded a monastery between the rivers Elwid and Edway. In this monastery 666 people were daily enter-

tained. Of these 600 were kept employed within the house, while 300 laboured without; the rest prayed in succession; so that during the whole twenty-four hours somebody was always thus engaged." St Kentigern at length returned to his native country, and fixed his residence at Glasgow, where, according to Spottiswood, "he laid the foundation of a stately church, in which he was interred." The same author remarks, that it is said, "that after he came to years of understanding he did never eat flesh or taste wine or any strong drink; and when he went to rest slept on the cold ground, having a stone for his pillow." It is added that he reached the age of nine score and five years. When the Cathedral of Glasgow was reared in honour of him, the revenues of the see were found inadequate to the expence, and recourse was had to a contribution throughout all the parishes in Scotland. Religious establishments.

At the reformation, the archbishop of Glasgow was a James Beaton, nephew to Cardinal Beaton archbishop of St Andrew. He attempted at first to defend himself against the turbulent attacks which at that time were made upon the monasteries and powerful ecclesiastics. He formed an alliance with the Duke of Chatelherault, who agreed to defend him, and he fortified his castle with more care than formerly; but finding the torrent of public sentiment too strong to be resisted, he fled to France in 1560, carrying with him the archives of his see, which he deposited in the Scots College at Paris, in the monastery of Carthusians. He likewise took with him the relics of saints which were preserved in the Cathedral, together with the most valuable moveables contained in it. Among others were the following: The twelve apostles in silver, and the image of our Saviour in gold; two silver crosses, adorned with precious stones, and enriched with small portions of the wood of the true cross of Jesus Christ; Relics once kept in the Cathedral.

Religious establishments.

five silver caskets or coffers, one containing some of the hair of the blessed Virgin, and another containing a piece of the hair-garment worn by St Kentigern, and a part of the scourge with which he flogged himself, likewise a part of the scourge used by the turbulent St Thomas a-Becket of Canterbury; a piece of St Bartholemew's skin formed the precious relic contained in another casket; a bone of St Ninian was in a different casket; and the last of the five held a piece of the girdle worn by the blessed Virgin. The remaining relics carried off by the archbishop were not contained in such valuable materials; a bone of St Magdalene was contained in a crystal case. In four crystal phials were contained the following relics: In the first was a portion of the Virgin Mary's milk, and a piece of the manger of the stable in which Jesus Christ was born. In the second phial was a red liquor that flowed in former times from the tomb of St Kentigern; the third phial contained some bones of St Eugene and St Blaise; and in the fourth phial was part of the tomb of St Catherine. Besides these there were six hides or skins containing very precious relics. In one was a piece of St Martin's cloak, and in another was a part of the bodies of St Kentigern and St Thomas of Canterbury. In two linen bags were the bones of St Kentigern and St Thanew, and other saints; and a wooden chest contained a multitude of small relics. These riches had for ages rendered the Cathedral of Glasgow venerable, and a place to which pilgrimages were made.

Cathedral, how preserved at the reformation.

When the most distinguished religious edifices were destroyed at the reformation, the Cathedral of Glasgow was preserved by the interference of some of the most reasonable of the citizens, who proposed to use it as a place of public worship. When the point was debated in the town-council, the provost for the time judiciously said, "I am

for pulling down the old church, but not till we have first built a new one." It was thus preserved during the first tempest of the reformation; and the citizens appear to have afterwards recovered a portion of their ancient attachment to it. In 1579, the principal of the university, and the protestant clergy in the neighbourhood, having at length prevailed with the magistrates to destroy this vast monument of the idolatry of their forefathers, a great number of workmen were hired, and assembled in solemn form, to proceed to the pious work of demolishing the building; but the members of the incorporations of the city, according to the violent temper of the age, instantly flew to arms, took possession of the building, and threatened with instant death the first individual who should attempt to violate it. The magistrates, to preserve the peace of the city, were under the necessity of engaging to preserve the Cathedral. The clergy presented a complaint to government, and the leaders of the insurrection were summoned to attend the privy-council; but government having approved of the conduct of the insurgents, the fabric has from that time remained unmolested. Religious establishments.

The Cathedral, as already mentioned, stands at the upper or northern part of the High Street of Glasgow, in a very elevated situation, commanding a view of the vale of Clyde from the mountain of Tintoc on the east, to Paisley, Greenock, and the mountains of Argyleshire on the west. Immediately to the east of the Cathedral is a deep ravine, in which flows the Mollendinar or Gallowgate Burn; and in its vicinity, on the opposite side, is a modern public building, the Infirmary, to be afterwards mentioned, which forms a striking contrast to the rude majesty of this ancient Gothic fabric. The length of the Cathedral within the walls is 339 feet, and its breadth 72 feet. The height of the choir from the floor to the roof is 90 feet; that of Cathedral described.

Religious establishments.

the nave, now called the Inner High Church, 85 feet. The circumference of the walls, without following the windings of the aisles, is 975 feet. It is supported by 147 pillars, and lighted by 157 windows. Like all other buildings of a similar nature, it is in the form of a cross, whose greatest length runs from east to west, and its transverse or shortest length from north to south. On the outside of the building, the walls which run east and west are supported, or rather aided, by strong pillars or buttresses standing out from the walls, but leaning towards them. Between each of the great pillars are placed Gothic windows of different dimensions. This succession of pillars and windows proceeds along the whole outside of the side walls of the building from east to west, excepting at the centre, where the transverse part of the cross projects outward on both sides. The ends of this projection contain each a great window on opposite sides of the Cathedral, 40 feet high and 22 feet in breadth at the base. Along the side walls the alternate windows and pillars reach nearly to the commencement of the roof at the summit of the wall. From the wall springs the roof, which rises obliquely inward, and thereafter reaches a second or inner wall, the whole length of which is divided, like the lower or front wall, by pillars or projections, between each of which are three narrow Gothic windows on the same line with the windows of the lower story. The inner side walls support a roof which is covered with lead. The inner walls rest upon Gothic arches supported by pillars within the building. This church has two towers or steeples; one of these, at the west end, is a square tower, which rises about 30 feet above the roof, and thereafter terminates in a roof in the form of a pyramid, which is covered with lead. The great tower or steeple rises from the centre of the whole building. Its form, to

the height of about 30 feet from the roof of the Cathedral, is square, terminating in a battlement and ballustrade. Within the battlement an octangular spire of a tapering form ascends, and is terminated by a vane or weathercock. The octangular spire is adorned by two ballustrades, and by several Gothic windows. The height of this middle steeple is 228 feet from the floor of the choir, or 322 feet above the level of the Clyde. In the lesser steeple is placed a clock and a great bell, which is twelve feet one inch in circumference, and has a grave and deep note. It is rung at the hour of ten every evening. In 1789 it was accidentally cracked by some persons who had got admission to the steeple. It was therefore sent to London and cast anew. On the outside of it is the following inscription:

Religious establishments.

Great Bell.

In the year of Grace
1594,
MARCUS KNOX,
A Merchant in Glasgow,
Zealous for the interest of the Reformed Religion,
Caused me to be fabricated in Holland
For the Use of his Fellow-citizens of Glasgow;
And placed me with solemnity
In the Tower of their Cathedral.
My Function
Was announced by the Impress on my Bosom,
(*Me audito venias Doctrinam sanctam ut discas**;)
And
I was taught to proclaim the Hours of unheeded Time.
195 Years had I sounded these awful Warnings,
When I was broken
By the Hands of inconsiderate and unskilful Men.

* Come that ye may learn holy doctrine.

Religious establishments.

In the Year 1790,
I was cast into the Furnace,
Refounded at London,
And returned to my sacred Vocation.
Reader,
Thou also shalt know a Resurrection;
May it be unto eternal Life!
Thomas Mears fecit, London, 1790.

The chapter-house was in the north cross of the Cathedral, and had a communication with the nave by a vaulted entry. The south cross was never completed, and is at present used as a burying-place for the clergy of the city. Its architecture appears to have been finer than that of the rest of the building. Its arched roof is supported by columns adjoining to the outer walls. These columns or pillars support Gothic arches. There is also a row of pillars in the centre; the capitals of the whole are highly ornamented. The south part of the cross is supposed to be of no older date than 1500. The area of the top of it is at present formed into an ornamented piece of garden ground. The consistorial house, in which the bishop's courts were formerly held, projects from the south-west corner of the Cathedral. The principal gate, which is now shut up, is large and magnificent. It is on the west, betwixt the consistorial house and the lowest tower or steeple. The usual entries are at present on the south. The building is at present occupied by three churches, besides the choir, which remains in some degree empty. These are called the Outer Church, Inner High Church, and Barony Church. The Outer Church was formerly a part of the choir; from the rest of which it is at present separated by a division-wall of stone. Here are to be seen two rows of Gothic columns, which support the inner side walls of the Cathedral. Arches spring

Modern divisions.

from the top of the pillars, and connect them with each other. Upon these arches the inner side walls are built. In the choir is to be seen the same range of pillars, with windows between each. The four most easterly pillars are very massy; each of them is 30 feet in circumference and 88 feet in height; they support the great steeple in the centre of the church. Here an organ, belonging to the institution for sacred music, has been erected. Religious establishments.

In the Inner High Church is to be seen to advantage the lofty arched roof which springs from the top of the inner walls; on the east, in the area which is now at the back of the pulpit, stood the altar; northward from which is the vestry, the roof of which is supported by a single pillar 19 feet in height, from which spring arches in all directions towards pillars in each angle of the house. The Barony Church is a very dismal place, situated immediately under the nave or Inner High Church to the east of the cross. It was formerly used as a burying vault; at the eastern part of it, immediately below the great altar, is shown the monument of St Mungo or Kentigern, and the bason for containing the holy water. Upon the whole, this vast and massy pile conveys a high idea of the power of the church in ancient times, and no small opinion of the architectural skill of the age in which it was erected. From an inscription upon the abbey church of Melrose in 1146, the architect appears to have been John Murdo, a Parisian.

John Murdo some time callit was I,
And born in Paryse certainly,
And had in kepying all mason work
Of Sanctandreys, the Hye Kirk
Of Glasgu, Melros, and Paslay,
Of Nyddysdal, and of Galway.
Pray to God and Mari baith,
And sweet St John keep this haly kyrk frae skaith

Religious establishments.

Around the Cathedral is the principal burying-ground of the city.

College Church.

The College Church derives its name from its vicinity to the College or University, to the southward of which it is placed. On the same spot stood an ancient Gothic pile, the Church of the Blackfriars, supposed to have been more ancient than the Cathedral by nearly 500 years. This ancient building was destroyed by lightning in 1660, and the present fabric was built on its site 33 years thereafter. Little taste or ornament appear in it, as the presbyterians of that age thought they could not remove themselves far enough from the splendour which accompanied the catholic worship.

Tron Church.

The Tron or Laigh Church, which stands in the Trongate, near the head of King Street, the steeple of which projects into the street, and is seen from the Cross, is a handsome modern building erected in 1794. As it is surrounded by buildings, it was thought that it might not be possible to light it sufficiently by windows in the side-walls. It is therefore crowned in the centre of the roof by a glass dome. A church was originally founded here by the community of Glasgow in 1484; it was dedicated to the Virgin Mary and St Michael, and had a provost and eight or nine prebends, besides several altars attended by chaplains. In 1592 it was repaired, and some additions were afterwards made to it. In 1793, between four and five of the morning, it was discovered to be on fire, and in two hours, in spite of every effort, it was consumed. The session-house adjoining to it was at that time used by the citizens as a guard-room, and the fire is supposed to have been communicated thence in consequence of some accidental neglect. The records of the general session of Glasgow having been deposited here were entirely consumed. The present fabric, as already men-

tioned, was erected on the same spot. The steeple or spire of this church, which was formerly noticed as one of the ornaments of the most extensive street in this city, was built in 1637, and is 126 feet in height. The Tron, or place for weighing merchandise, was formerly here, and the ground-flat of the steeple was long used for weighing butter, cheese, and tallow; a circumstance which appears to have given a name both to the church and to the street in which it stands. Religious establishments.

The Wynd Church, at the back of King Street, with which it communicates, was originally built by the presbyterian dissenters, during the reign of James the Seventh, in consequence of a toleration granted them. It has since been rebuilt by the city; it has no spire or bell. Wynd Church.

The North-West or Ram's Horn Church was built by the community of Glasgow in 1724. It has a spire and clock, but contains nothing remarkable. The spire is 140 feet in height. Ram's Horn Church.

St Andrew's Church, in the centre of the square of that name, is an elegant oblong building, which was begun in 1739, but was not finished till 1756. Its western front or end, which looks along the communication or street between St Andrew Square and Salt Market Street, is adorned with six Corinthian pillars standing above a flight of steps. Pilasters with Corinthian capitals are placed along the remaining sides of the building between each of the windows. The inside of the church is very elegantly finished. The front of the galleries, as well as the pulpit, are wrought in mahogany. A double row of Corinthian columns runs from east to west parallel to the walls, and having corresponding pilasters in the latter; thereby forming a kind of arched passage on each side, with an ornamented arched roof, above which are the galleries. The steeple of this church has been said by Pennant to have a St Andrew's Church.

Religious establishments.

pepper-box top: it is crowned with a dome beneath the spire on which the weather-cock is placed; and by its injudicious construction the upper part of it seems to a spectator larger, or of a greater diameter, than the lower part.

St Enoch's Church.

St Enoch's Church stands at the southern part of the square of the same name, looking northward towards the entry by which the square communicates with Argyle Street. The foundation-stone of it was laid on 12th April 1780. Its form resembles that of St Andrew. Its northern front or end, which is its principal entry, is adorned with a small portico supported by Doric pillars. It is well lighted, particularly by a great Venetian window opposite to the principal entrance, and is handsomely finished within.

New Barony Church.

The most recent of the churches of Glasgow is the New Barony Church. It was finished within these three years, and stands to the south of the burying-ground belonging to the Cathedral. It was erected by the proprietors of the Barony parish. The design was given by Adams, but it has been executed in a very coarse manner.

The village of Gorbals also has its own church and burying-ground, and forms a separate parish.

College Chapel, &c.

Besides these there are three chapels belonging to the establishment: One is the College Chapel, in which divine service is attended by the students attending the university, and the professors and their families: Another is called the Free Presbyterian Meeting-House, which formerly belonged to the sect of dissenters called the *presbytery of relief*, but was restored to the communion of the established church in 1774. The congregation is numerous, and divine service is performed by two clergymen. In the third chapel divine service is performed, partly in the English language and partly in Gaelic, for the accom-

modation of the natives of the Highlands who reside in the city. Religious establishments.

Near the southern extremity of the Salt Market Street, in a damp situation, on the immediate banks of the Gallowgate Burn (here, by its passage through the city become a very foul stream), is the English Chapel, in which service is performed according to the manner of the church of England. It is handsomely finished, and has a good organ. It was built in 1791, and met with no small opposition from the common people, who still, on account of its organ, stigmatize it with the contemptuous epithet of the *whistling kirk*. Two clergymen officiate in it. There are also two burgher and one anti-burgher meeting-houses; a place of worship belonging to a congregation of independents; one or perhaps two for anabaptists; one for Glassites; a large methodist meeting-house, the congregation of which are not at present on the increase; two large houses and two congregations of the relief communion; besides a large church in Anderston, another in the Calton, and a popish meeting. The latest of the religious establishments is that denominated the Tabernacle; it consists of a building formerly used as a circus, and which is situated in Jamaica Street. It belongs to a new sect which has established itself here and in Edinburgh, Dundee, and elsewhere; sends forth itinerant preachers to different quarters of the country; holds correspondence with the English methodists; and does not limit its adherence to a strict attachment to any particular denomination of Christians. The congregation is very numerous. English Chapel. Tabernacle.

LITERARY INSTITUTIONS.

At the head of these the university must necessarily stand. It consists, like that of Edinburgh, of a single college.

Literary institutions.

University or College.

We have already remarked, that the buildings of the College stand on the east side of the High Street, about half way between the Cross and the Cathedral. They still form the finest set of buildings in Scotland appropriated to the education of youth; for we must consider the New College of Edinburgh, on account of the absurd scale of expence in which it was begun, as an unfinished work, which is not likely to be completed in our days. The front towards the street is of polished stone, three stories in height, and 330 feet in length. The principal gate is in the centre, and has the royal arms placed over it. At some distance, to the right and left, are two other lofty arched gates; the one leads into a handsome court, in which the professors reside. The sides of the area in this court have a stone-pavement, and the middle is formed with gravel, with a well in the centre. The other side-gate leads into a garden allotted to the principal of the university. The chief gate, which we first mentioned, and which is in the centre of the front of the buildings, leads into a court or area surrounded by stone-buildings. The open area is 68 feet long and 44 feet broad. From this court is a passage eastward to a second court, the area of which is 103 feet in length, and 79 feet in breadth. Both courts are paved with hewn free-stone. In the outer or smaller western court, nearest the street, is what is what is called the Faculty Hall of the university. It contains two historical paintings by Renbens; the Burial of our Saviour, and the Martyrdom of Saint Katharine. The Chapter Room of the university is in this court, and also the Divinity Hall, and other apartments for the accommodation of different classes. The Divinity Hall is ornamented by portraits of John Knox and Martin Luther, George Buchanan, William the Third and Mary his Queen, and Queen Ann, and others.

Its buildings described.

Over the passage or entry from the outer to the inner and larger court is the steeple of the college. It has a good clock. It is protected against thunder by a metallic rod, which rises higher than the weather-cock, and is carried down 135 feet to the earth. The inner court contains halls, class-rooms, and other apartments. It has a communication towards the east, where is an area surrounded on three sides by buildings; but in front eastward is the garden of the university, protected here by a gate or railing of iron. On the southern side of this innermost or eastern court, adjoining to the garden, is the library of the university, a handsome and lofty apartment, containing about 20,000 volumes. Here are preserved a considerable number of stones containing ancient inscriptions or figures brought from the Roman wall between the Forth and Clyde. The garden of the university is laid out in walks, lined with trees and hedges, but kept always in grass. It declines gently towards the Mollendinar Burn on the east, and is everywhere surrounded by a high wall. It is allowed to be used as a public walk or place of amusement and exercise by the students. To the eastward, beyond the Mollendinar Burn, over which a bridge is thrown, the territory ascends, and in an elevated situation the observatory of the university is placed. It contains a valuable apparatus for the study of astronomy; and in particular a reflecting telescope, constructed by Herschel, ten feet in length, and ten inches diameter.

Literary institutions.

Library.

Observatory.

This university has a professor in each of the following departments, nominated by the university or crown.

Classes.

Profession.	Patron.
Divinity	University.
Church History	Crown.
Oriental Languages	University.
Natural Philosophy	Ditto.

Literary institutions.

Profession.	Patron.
Mathematics	University.
Moral Philosophy	Ditto.
Logic	Ditto.
Greek	Ditto.
Humanity	Ditto.
Civil Law	Crown.
Medicine	Ditto.
Anatomy and Botany	Ditto.
Practical Astronomy	Ditto.
Materia Medica	University.
Chemistry	Ditto.
Midwifery	Ditto.
Botany	Ditto.
Natural History	Ditto.
Drawing and Painting	Ditto.

Besides the regular professors, the college has a chancellor, rector, dean of faculties, and principal. The session of college commences in October or November, and terminates in May or June in different classes. The class of botany commences on the 1st of May. The students who attend the Latin or humanity, Greek and logic classes, are required to wear scarlet gowns; but the students reside not in the university, but in private houses. Degrees are granted by the university to students after examination; but the degree of doctor of divinity and doctor of laws is both there and in other Scottish universities considered as honorary. The latter, however, may be obtained by students of the university in consequence of examinations.

The college, considered as an incorporation, possesses considerable funds, which are managed by the principal and professors, who fix from time to time the extent of their own salaries, which are moderate; so that their per-

sonal wealth depends in a great degree upon the fees received from students. Literary institutions.

This university was originally instituted by a bull from Pope Nicolas the Fifth, at the request of James the Second; and William Turnbull, then bishop of Glasgow, and his successors in that see, were appointed patrons of the university. The bull is dated at Rome, 7th January 1450. The university was opened in the following year; and to give celebrity to the event, the bishop published a bull, which he obtained from the pope, granting an universal indulgence to all good Christians who should visit Glasgow in 1451. David Cadzow was the first rector. James the Second, in 1453, granted a charter in favour of the university, declaring that the whole members of the university, whether masters or students, if not prelates, should be exempted from every sort of national tax or public burden; and this privilege was repeatedly confirmed by statute. Bishop Turnbull, also, who appears to have been the real founder of the university, ordained that all the beneficed clergy of his diocese, who should become teachers or students in the university should be exempted, during their attendance, from residence at their different cures, providing they take care to have the religious offices performed by vicars. This bishop also, and his successors, conferred upon the members of the university many remarkable privileges, such as the power of buying and selling provisions without toll or custom within the bishop's jurisdiction. The magistrates of Glasgow were required to swear a sort of allegiance to the college, or that they would observe its whole immunities and statutes. The most complete civil and criminal jurisdiction was conferred upon the rector of the university; and whatever houses were possessed by its members, the rents of them were ordained to be fixed by a jury, consist- History of the University.

Literary institutions.

ing, the one-half of members of the university, and the other half of citizens.

Previous to the reformation, the whole university formed, like a royal borough, a general corporation, while, at the same time, it was divided into different faculties, which, like the different classes of tradesmen in a borough, were distinct inferior corporations, enjoying peculiar immunities, property, and byelaws. The whole incorporated members of this university, whether students or teachers, assembled annually in full congregation on the day after St Crispin's day. They were divided into four classes, called *nations*, according to the place of their nativity. Under the heads of Clydesdale, Teviotdale, Albany, and Rothsay, all Scotland was included. Each class or nation elected representatives, who acted as assistants to the rector on weighty occasions. The congregation of the university was often called, and usually elected representatives to act in their stead. Each of the faculties of theology, law, and arts, or general literature, had its own assemblies and representatives, by whom it was governed. As the whole university had a rector elected by all the members, so each faculty had its own separate dean or rector and assistants elected by its members. It is singular, that when this university was instituted, no funds appear to have been set apart for its support, nor any salaries granted to those employed in the laborious business of teaching; neither was any sufficient authority constituted for rectifying disorders that might occur in the university. The consequence was, that when the Roman catholic hierarchy fell into pieces at the reformation, and its property was seized by the crown or the nobles, this university almost ceased to exist; gradually, however, the crown and individuals granted to it various donations, particularly of

tithes and church-property; and James the Sixth, in his minority, during the regency of Morton, in 1577, granted it some ecclesiastical property, and a new charter of foundation, regulating its constitution, and confirming its previous privileges. Charles the First granted to the college, in 1641, the temporality of the bishopric of Galloway. After the revolution in 1693 the sum of L. 300 *per annum* was granted to each of the Scottish universities out of the property of the abolished bishoprics in Scotland; and the college of Glasgow, to secure payment of this sum more effectually, obtained a lease for nineteen years of the rents of the archbishopric; and this lease has been periodically renewed by the crown. At present, by the constitution of the university, the office of chancellor is usually filled by some nobleman or other gentleman of rank in the country. He is chosen by the rector, dean of faculty, principal, and professors. The chancellor being the head of the university, presides in all its councils; and in his name are all academical degrees bestowed.

Literary institutions.

The chancellor.

The rector is chosen annually in the *comitia;* that is, in a court, in which all the students, on this particular occasion, are entitled to vote, as well as the other members of the university. He, with the advice of his assessors, whom he nominates, judges in all disputes amongst the students, and betwixt them and the citizens. He also summons and presides in the meetings of the university called for the election of his successor, or for preparing addresses to the king, electing a member to the general assembly, &c.

The rector.

The officer next in rank is the dean of faculty, who is chosen annually by the rector, principal, and professors. His office consists in giving directions with regard to the course of studies; in judging, together with the rector, principal, and professors, of the qualifications of those who desire to take academical degrees; and in such

Dean of faculty.

Literary institutions.

meetings as are called for these purposes he, in absence of the rector, presides.

The number of students usually exceed 600. In consequence of their right of interference in the election of the rector and some other matters, they have sometimes been known to enter into factions, and the peace of the university has been disturbed by seditions. The management of the property and patronage vested in the university, in like manner, divides the professors into parties: an evil which never occurs where professors of an university are merely teachers employed, and to a certain extent paid by the public, and where the students, not being an incorporated body, consider the university in no other light than that of a school in which instruction is to be received.

Hunter's donation.

Among the many donations that have been made to this university, one of the most important was that made by the late Dr William Hunter of London. He by his will bequeathed his museum to the university, reserving the use of it for thirty years to his nephew (and failing him to his partner), for the purpose of promoting anatomical and natural knowledge. He also left to the university L. 8000 Sterling, to be paid to them within two years; one-half of the interest whereof to be applied for supporting the museum while in London; the other half, together with the capital, to be at the immediate disposal of the university, for the purpose of buying ground, and erecting proper buildings for the reception of the museum. The principal articles of the museum are, a most curious and valuable library of books and manuscripts; his own large and incomparable anatomical preparations; a choice collection of natural curiosities, containing, among other particulars, the large collection of shells, corals, insects, and snails, of the late Dr Fothergill; and a cabinet of

coins and medals, ancient and modern, of which the different series are confessedly the most complete and best connected of any in Europe, and are said (this last article alone) to have cost him upwards of L.25,000 Sterling. This donation, by the decease of the intermediate assignees, has now taken effect. Literary institutions.

The foundation by Mr Snell deserves particularly to be mentioned, as perhaps one of the largest and most liberal in Britain. That gentleman, in the year 1686, bequeathed a considerable estate in Warwickshire for the support of *Scottish students* at Baliol college, Oxford, who had studied for some years at the university of Glasgow. By the rise in the value of lands, and the improvements which have from time to time been made on that estate, that fund now affords L. 70 *per annum* for ten years to each of ten exhibitioners. Another foundation at the same college, of L. 20 *per annum* to each of four Scottish students, though under a different patronage, is generally given to the Glasgow exhibitioners; so that four of them have a stipend of L. 90 *per annum*, continuing for ten years. The university have the sole nomination or appointment of these exhibitioners. Snell's foundation.

The late Mr John Anderson, professor of physic in the university of Glasgow, attempted, by his last will, to institute a sort of additional university. He conveyed his whole property to trustees for behoof of his intended establishment. These trustees were eighty-one in number, and were selected by Mr Anderson from nine classes of men; *viz.* tradesmen or mechanics, agriculturists, artists, manufacturers, physicians and surgeons, lawyers, divines, natural philosophers, and, lastly, kinsmen or name-sakes of the founder. These classes are empowered to fill up by ballot all vacancies which may happen in any of them, either by resignation or death, within the space of four ca- Anderson's institution.

Literary institutions.

lendar months from the date of such vacancies; but if they shall allow this time to expire, the vacancies must be filled up by ballot at the first general meeting of the trustees.

For the superintendence of the conduct of the trustees, and the regulation of the affairs of the institution, nine visitors are likewise appointed; *viz.* the lord-provost of Glasgow, the eldest bailie, the dean of guild, the deacon-convener, the president of the faculty of physicians and surgeons, the dean of the procurators, the moderator of the synod of Glasgow and Air, the moderator of the presbytery of Glasgow, and the moderator of the presbytery of Dunbarton; any six of whom to be a quorum. Four general meetings of these trustees or governors, before mentioned, are appointed to be holden in the course of every year; *viz.* on the day of the summer and winter solstice, and the day of the vernal and autumnal equinox. At these meetings every thing which relates to the interest of the institution is considered; a majority in all cases deciding the questions which may be agitated.

Nine ordinary managers are also directed to be chosen by the trustees annually from those resident in Glasgow. To these managers, who are required to meet upon the first Thursday of every month, is committed the regulation of the ordinary business of the institution, of which they are expected to present a report to each of the four general meetings. This institution, when completed, is intended to consist of four colleges and a school or academy; these are the colleges of arts, medicine, law, and theology: each college to consist of nine professors, the senior professor being president or dean.

This extensive plan was undoubtedly not necessary, as the ancient university already established in Glasgow is sufficiently adequate to the fulfilment of its principal objects. Mr Anderson, during life, was known to be much attached to those branches of experimen-

tal philosophy which are most subservient to general utility, and to the operations of the different arts and manufactures to which the talents and the wants of civilized nations have given birth. His property bequeathed to the institution consisted chiefly of a very valuable apparatus, which he had formed for illustrating the various branches of natural philosophy and chemistry; a museum, containing a well arranged collection of fossils, working models of different kinds of machinery; a complete apparatus for illustrating fortification and military tactics; together with a large library, consisting of the most select scientific works in different languages. After Mr Anderson's death, his bequest was naturally considered in Glasgow as an attempt to enlighten his fellow-citizens upon the subject of his own favourite studies, and his views became very popular. The institution was set on foot in 1796 upon the plan of giving lectures, both popular and scientific, on natural philosophy and chemistry; for which purpose the late Dr Garnet was appointed lecturer. For the two first sessions the lectures were delivered in the trades-hall, and in a part of the grammar-school; but previous to the third session, several public-spirited gentlemen, friends to the institution, purchased and fitted up for its accommodation a very spacious and convenient hall, with adjoining rooms for containing the library, museum, and apparatus. Probably, in imitation of Mr Anderson's institution, according to the form which it had assumed, of lectures upon the branches of science most immediately subservient to the mechanic and commercial arts, a similar establishment, under the name of the Royal Institution, was soon formed at London; and thither the first lecturer, the late Dr Garnet, was invited. He was succeeded at Glasgow by Dr Birkbeck. Besides natural philosophy and chemistry, the popular lectures,

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which are attended by ladies as well as gentlemen, a course of geography and astronomy has been occasionally given; and Dr Birkbeck, with the beneficent view of diffusing philosophical information as extensively as possible, has given a course of lectures for the instruction of operative workmen, or that portion of the community engaged in the actual execution of the arts connected with mechanics and chemistry. These lectures, delivered in a perspicuous style, in which every principle was illustrated by models and experiments, were at first given gratuitously, and afterwards for a trifling fee from each individual. The lectures have been attended every session by nearly 500 persons of the class for whose instruction they were intended; and they have displayed a degree of anxiety, or rather of enthusiasm, for the acquisition of scientific knowledge, which does the highest honour to the character of the general population of this city.

Royal Infirmary.

As connected with the medical branch of study in the university, the Royal Infirmary next requires attention. The funds for establishing this infirmary were obtained by voluntary contribution; and to give regularity and permanency to the establishment, a royal charter was obtained on the 21st December 1791, creating an incorporation for the purpose of managing it. The Royal Infirmary stands immediately westward from the Cathedral of Glasgow, where the bishop's palace or castle formerly stood. The building is formed from a plan given by Adams. Its appearance is extremely elegant, forming, as already noticed, a striking contrast to the rude majesty of the venerable pile near which it stands. Its form is in general that of a parallelogram, running east and west, and having its front westward; but at each side are two square projections or pediments about three feet in depth. In the centre there is another still more considerable

The height of the building is four stories; the lowest of which is of rough work: the rest are of polished free-stone. Above the gate, in the centre of the middle projection, are four Corinthian columns supporting a triangular pediment, over which are the royal arms. Between the central pillars a great Venetian window is seen. Above this, in the centre of the building, is a lofty dome, covered in its upper part with glass. On the small projections or wings at the extremities of the building, are two great Venetian windows, which occupy two stories; and beneath each of these is an arched window. This figure of the arch appears to be an ornament, of which in great buildings Adams was very fond. In the wards are two rows of beds, with a passage in the centre, which conducts to a fireplace at the extremity; near which are four small apartments intended for nurses, and patients under peculiar diseases that require separation from the other sick. The frames of the beds are of cast iron. The operation-room is a large circular apartment fitted up in the form of an amphitheatre in the third story; it is lighted by the glass-dome already mentioned. The house contains hot and cold baths, and is plentifully supplied with water, brought in leaden pipes from a reservoir at some distance. Literary institutions.

This house was opened for the reception of patients on the 8th of December 1794. The whole capital of the institution, after defraying the expence of the building, amounted only to L. 2206 : 11 : 6 Sterling; but two years thereafter, in consequence of donations from individuals and public bodies, the capital was found to have increased to L. 4374, 14s. It now amounts to between L. 7000 and L. 8000. In the meanwhile many thousand patients have been received into it; and the establishment has been conducted in such a manner as does great honour to the

Literary institutions.

medical practitioners of the city of Glasgow, as well as to other persons who have assisted in conducting the affairs of the institution. By the royal charter of the Infirmary, the management of it is vested in twenty-five managers or directors; of which number, seven, from their office, are managers without election or nomination, *viz.* the lord provost of Glasgow, the member of parliament for the city, the dean of guild, the deacon-convener, the professor of anatomy, the professor of medicine, the president of the faculty of physicians and surgeons. Eighteen managers are annually elected; *viz.* one by the magistrates and council, one by the merchants-house, one by the trades-house, one by the faculty of the college, one by the ministers of Glasgow, three by the faculty of physicians and surgeons, ten by contributors of L. 10 or more, and subscribers of L. 2, 2 s. annually, or more, and by the presidents or heads of the societies or bodies of men who have contributed L. 50 or more, or who have subscribed annually L. 5, 5 s. or more. Patients are admitted (unless in cases that admit of no delay) by instructions from a committee; and the contributors, according to the extent of their contributions are authorised to admit patients.

Grammar school.

The grammar-school or Latin school of Glasgow is a handsome building in George Street, in the north-west quarter of the city called the New Town. In the lower story is a great hall, 51 feet in length and 27 in breadth. The teaching rooms above stairs are 30 feet in length and 19 in breadth. The school is arranged into four classes, with as many teachers, without any established rector. One teacher receives all the boys who enter to the school in that year, and is followed by his colleagues in rotation. The boys remain during the full four years of their attendance with the same master, and at the end of that time they are dismissed, and he begins a new class. The scholars are fre-

quently examined in presence of the magistrates of the city. The fees paid by each scholar amount to 6s. *per* quarter, besides a gratuity to the teachers at Candlemas, 2s. during the winter for fuel, and a trifle yearly to the janitor or servant of the school. The salaries of the masters given by the city amount to L.25 to each annually. As the teacher of the senior class acts during his year as a kind of rector superintending the rest, he is allowed L.10 during that year for his extraordinary trouble; and every fourth year the sum of L.5 is granted to each of the teachers of the three junior classes. The most obvious defect of this establishment is, that the period of education for young boys is too short; and the professor of Latin, or humanity as it is called (*literæ humaniores*), in the university, is in a great degree thereby converted into an ordinary schoolmaster. Besides this establishment, there are in the city a great variety of private schools in which the Latin and English languages are taught; and also writing, arithmetic, book-keeping, mathematics, &c. It is also to be observed, that different charitable funds have been established for giving gratuitous education to the children of the poor. Mr Wilson of London, who formerly had gone from this city impressed with the advantages of education to the lower class of people, in 1778 mortified L.3000 for the purpose of educating and clothing boys. This fund has been augmented by sundry donations from other persons, and now educates forty-eight boys, who at the end of four years are also completely clothed and bound apprentices to trades. Besides these, Crawford's school gives education to forty-eight boys and girls, Tennent's to ninety-six, and Baxter's to forty-eight, though without clothing. There are also, of late, some schools set apart for girls, such as Lennox's school, which educates forty-eight, and Peadie's, which educates about thirty, in

Literary institutions.

Wilson's school.

Crawford's Baxter's, Lennox's schools.

Literary institutions.

reading, sewing, and knitting. Archibald Millar, merchant in Glasgow, likewise bequeathed his property, amounting to L.7000 Sterling, to trustees, for the education of girls belonging to indigent parents in the city. He died in 1780. The clergy of the city, with the principal and professor of divinity in the university, and a representative of each of the kirk-sessions, are appointed managers. To all these may be added a considerable number of Sunday schools, under the management of an association for that purpose. The schools are about twelve in number, and are attended by nearly 500 children. The object of them is the instruction in reading the English language, and in the principles of religion, of the children of such of the poor inhabitants as might otherwise be left destitute of instruction.

Millar's school.

Sunday schools.

Stirling's Library.

As connected with this subject, we may take notice of Stirling's Library, established by Mr Walter Stirling, merchant in Glasgow, who bequeathed L.1000 Sterling, a tenement in Millar Street, and a share of the Tontine Society, for the purpose of establishing a library for the benefit of the citizens of Glasgow. The management is vested in thirteen persons, of whom four belong to the town-council of Glasgow, and each of the following bodies nominate three; *viz.* the merchants-house or company, the presbytery of Glasgow, and the faculty of physicians and surgeons. The library, which is in Hutcheson's Hospital, is open daily from twelve to three o'clock in the afternoon. Every subscriber of five guineas is entitled to use the library, by reading every day in it, or by borrowing books to the amount of his subscription. If the value of the books borrowed is higher, he must deposit the difference. The directors also have power, on particular occasions, to authorise non-subscribers to borrow books. This library is rapidly increasing; it contains

already about 8000 volumes, and has more than 500 subscribers. Literary institutions.

As the surgeons of Glasgow have never, as in Edinburgh, bought the birthright of their ancient brethren the barbers, and thereby introduced themselves into a share of the politics of the borough, they are entitled to be here noticed as an institution purely literary, in conjunction with their proper associates the physicians. The physicians and surgeons of Glasgow were erected into a body corporate by a charter from King James the Sixth in 1599. The charter was confirmed in 1672: it confers upon the faculty the privileges of being exempted from all "weapons-shawing, roads, hosts, bearing of armour, watching, warding, stenting, taxations, passing on assize, inquests, justice-courts, sheriff, burgh-courts, in actions civil and criminal, excepting in giving their counsel in matters appertaining to the said arts." The same charters also confer upon the faculty the privilege, which they still exercise, of examining, and, if found qualified, of licensing all practitioners of medicine or surgery within the boroughs of Glasgow, Renfrew, and Dunbarton, and the sheriffdoms of Renfrew, Lanark, Kyle, Carrick, Air, and Cunningham. The fee on admission into the faculty amounts to L.84, 11s. They have a fund for the benefit of their widows and children. They have a hall on the east side of St Enoch's Square, which is a handsome building of two stories in height. Here their library is placed, which contains some thousand volumes, not only of a professional nature, but in every branch of general literature. Physicians and surgeons incorporation.

Since 1755, a club, under the appellation of the *Literary Society*, consisting of the professors of the college and the clergymen of the city, have been accustomed to meet every week, during winter, in an apartment of the Literary Society

Charitable institutions.

university, and to discuss questions connected with general literature. Of late, also, other societies of a similar nature have been established; such as the philo-technical society in 1800, and the philosophical society in 1802.

CHARITABLE INSTITUTIONS.

PREVIOUS to the reformation, the ecclesiastical establishment was the great source of all charity; and whatever funds were meant to be thus expended were vested in the clergy as trustees. Indeed it was in this form, that is, as the treasurers of the poor, that the church of Rome obtained a large proportion of its wealth. Of all charitable institutions connected with the Roman Catholic Cathedral of Glasgow, none has descended to the present time except St Nicholas' Hospital, founded by Bishop Muirhead, about the middle of the 15th century, for the maintenance of twelve old men and a priest; but its revenue has been almost entirely dilapidated; and even now, after the greatest efforts, yields little more than L.20 a-year. The building, which was a handsome Gothic edifice, is now ruinous. It stands at the northern or upper part of the city, nearly opposite to the New Barony Church.

St Nicholas' Hospital.

Merchants Hospital.

The Merchants Hospital is also an ancient establishment belonging to the society of merchants in Glasgow. The date of its original institution is not known, but it was previous to 1605. Being in a decayed condition, it was taken down in 1659, and the edifice now called the Merchants Hall erected in its stead. The property of this charitable establishment amounts to L.18,000, and the revenues are employed in the relief of decayed members, or their widows and descendants, by means of pensions a

for there is now no hospital, properly speaking, considered as a place of residence for the poor. The building, erected on the site of the old hospital, stands upon the south side of the street leading from the Salt Market to the old bridge, called the Bridgegate. It consists of two stories; the lowest of which is occupied by shops; the second story is chiefly occupied by the hall, which is nearly thirty feet wide and eighty feet in length. Adjoining to the building, on the south, it has a lofty spire, 164 feet in height, of a square form, terminating in a pyramid. Over all, instead of a weather-cock, is a gilded ship in full sail. Charitable institutions.

The Trades Hospital is likewise known to have existed in 1605. It was originally established by the incorporations of the city, but the precise date is not known. It is called the Alms House, and stands in the upper part of the High Street, between the Rottenrow and St Nicholas' Hospital, where the street receives the appellation of Kirk Street or Kirkgate. It has a small projection towards the street, with a turret and bell. The bell tolls at the passing of every funeral towards the High Churchyard; and usually a small sum is put into a box by the relations of the deceased, or attendants on the funeral. Above the box is the following inscription: "Give to the Puir and thou sal have treasure in Heavin. Mat. 19 Cha." In this building, which is now in a state of decay, is a hall in which the incorporations formerly convened for their elections and other public business; but as it was a small and mean place, a new building for that purpose was erected, called the Trades Hall, on the west side of Glassford Street. The foundation-stone of it was laid in 1791. The plan was formed by Robert Adam, Esq. architect. It consists of three flats or stories; the lowest of which is rusticated and ornamented by arched Trades Hospital.

Charitable Institutions

doors. The principal door stands in a projection of the second story, and is ornamented with four Doric columns, which support a triangular pediment, and have between them a large Venetian window, which lights the middle of the great hall. The same hall is lighted from the front by two additional Venetian windows and two square ones. The front of the house is terminated by a handsome rail of stone, on the centre of which are the arms of the city. From the middle of the roof rises a dome covered with lead. The great hall is seventy feet in length, and thirty-five in breadth, and is adorned with stucco-work in good taste. The funds of the trades devoted to charity amount to about L.500 *per annum*.

Hutcheson's Hospital.

The next charitable establishment, in point of antiquity, is Hutcheson's Hospital. It was founded by George Hutcheson, writer in Glasgow, in 1639, and farther endowed by his brother Thomas in the year 1641, for the support of twelve old men and twelve boys. The patrons are, a preceptor, together with the town-council and ministers of the city. From good management, and a variety of donations, the funds have increased to upwards of L.2300 *per annum*. The money is employed in giving pensions of from L.5 to L.20 *per annum* to old men in decayed circumstances, who had formerly possessed good character and credit in the city. The charity has likewise been extended, of late years, to women of the same description in pensions from L.5 to L.15 *per annum*. A part of it is also employed in giving clothing and pensions of L.3 each to a number of boys for four years, and in supporting a school for their education during that time. When they leave this school, where they learn reading, writing, and arithmetic, they are completely clothed and bound apprentices to different trades.

The old hospital stood upon the north side of the Trog-

gate. For the improvement of the city, as well as the funds of the institution, it was taken down, and a new street opened, leading northward from the spot at the head of the street, of which it forms a handsome termination, where the present hospital was built. Its front, which looks into John Street, is fifty-eight feet in length; the breadth of the building is fifty-five feet; the front, which is of polished stone, is adorned with Corinthian columns. It is crowned with a handsome spire of 150 feet in height. The great hall, which is surrounded by a gallery, has been used as a deposit for Stirling's library. Charitable institutions.

The Town's Hospital or Poors House was founded in the year 1730, and opened for the reception of the poor about three years thereafter. Like other establishments of the same sort in Scotland, it seems to have taken its rise from a disposition to imitate our more wealthy and powerful neighbours of England; who, although they are undoubtedly entitled, in most points of political and civil legislation, and in many valuable arts, to be respected as the instructors of mankind, have undoubtedly fallen far short of the wisdom of our ancestors in what respects the management of the poor. It is to be observed, however, that in Glasgow, notwithstanding the establishment of this hospital, a considerable proportion of the poor are supported as out-pensioners, which leaves them still in the midst of society, and under an inducement to exert themselves for their own support. The following is the amount of the public charity given by the city, considered as a collection of parishes, exclusive of the suburbs contained in the Barony parish, or the Gorbals, as stated in the general accounts of this hospital, from Denholm's History of Glasgow. It appears that in 1803, 336 persons resided in the house; the gross expenditure of charity amounted to L. 4663: 12: 7. Town's Hospital.

Charitable institutions.

Of this sum there was expended upon oat-meal to the poor who do not reside in the house.....L. 966 16 1

Sums to out-pensioners.....	213	9	2
Nurses fees to 315 children.....	965	18	8
L. 2146	3	11	

There remain for the expence of the hospital L. 2517, 8s. 7d. The average expence of each individual maintained in this hospital, therefore, amounted only to L. 7, 9s. 10d. which undoubtedly demonstrates great frugality of management on the part of the conductors of the institution. At the same time, when to this expence is added the cost of originally building the fabric of the house, and when it is considered, with the aid of what small sums given as out-pensions, the poor in Scotland usually contrive to maintain themselves, it will easily be seen that the community is very far from deriving immediate profit from such an establishment; while, at the same time, the poor themselves are placed in an unnatural, a degraded, and unsatisfactory situation: and by the unfortunate example of individuals of an unexceptionable character being at times compelled to accept of such a mode of relief, the reluctance towards entering an hospital is removed, and a foundation is laid for a permanent and costly poors rate.

This hospital stands adjacent to the river on the north side to the westward of the old bridge. It is three stories in height, consisting of a front and wings. It is kept clean, and well aired. To the northward of it, at some distance, is another building, in the lower apartments of which insane persons are confined; the upper part is used as an infirmary for the sick belonging to the hospital. The hospital is under the management of a preceptor, treasurer, and fifty directors, elected annually by the

town-council, the merchants, the incorporated trades, and the general kirk-session of the city. Charitable institutions.

The general session, composed, as already mentioned, of the ministers and the elders of the churches of the city, have under their management a revenue of from L. 1300 to L. 1400 *per annum*. This arises from donations granted to them at different times, and from donations frequently given at marriages and funerals. On these last occasions, donations, not below L.5, and seldom above ten guineas, are frequently given, for the purpose of obtaining the city-bells to be tolled at the funeral. The general sessions contribute from their funds L.300 annually to the support of the Town's Hospital; the remainder is allowed to be expended by the kirk-sessions of the particular parishes, in giving pensions and occasional relief to the poor within their respective boundaries; and some part of the funds are expended upon particular objects of charity, in obedience to directions given by the original granters of the funds. General session funds.

Sir John Scott of Scotstarvet, a senator of the college of justice, in June 1653, by a contract with the magistrates of Glasgow, conveyed to them the lands of Puckie and Puckie-Mill, in the parish of St Leonard's in Fife, for the purpose of putting four boys to apprenticeships within the city; the apprentice-fees to amount to 100 merks, or L.5 : 11 : 1⅓ Sterling; three of the boys to be named by the heirs of the granter, and one by the magistrates and town-council. In 1781, it was agreed by the magistrates and David Scott of Scotstarvet, Esq. that when the lands should yield L.30 *per annum* he should have a right to nominate four, and the magistrates two boys; and when the lands should yield L. 40 *per annum*, he should have a right to nominate six, without increasing the number named by the magistrates. Scott's mortification.

Charitable institutions.

Mitchell's mortification.

In 1729 Mr William Mitchell, merchant in London, left the sum of L. 2000 to the magistrates of Glasgow for the support of poor burgesses or their children, in the nomination of his executors and their heirs for ever. Robert Tennent, merchant in Glasgow, in 1739, bequeathed the sum of 500 merks Scots for the maintenance of poor children in the charity schools erected by his brother; also L. 400 Scots, to be applied by the magistrates for the annual relief of three widows of citizens; and the sum of 10,000 merks to be lent out by the magistrates for five years, without interest, in separate sums, to fifteen merchants and five tradesmen of the city. James Coulter, merchant in Glasgow, by his will, dated 22d November 1787, bequeathed the sum of L. 1200 as a perpetual charitable fund, in the management of the ministers and town-council of the city, to be distributed in annual pensions of from L. 4 to L. 12 Sterling.

Dispensary.

In this city, also, there is a Dispensary, supported by subscription, for the purpose of affording medical assistance to the poor; and in 1802 a Magdalene Asylum, for the protection of penitent females, was established by a society of persons. The grocers were incorporated by the town-council in 1789, to enable them to establish a permanent fund for the relief of their poor; and in like manner, in 1790, a similar institution was formed for the relief of the sons of the clergy of the church of Scotland. The capital of this society is said to amount to about L. 5000. A society was in 1790 established for giving assistance to persons apparently drowned. A Dispensary has also been established for the special purpose of inoculating children with the cow-pox gratuitously, and also for performing the same operation for the sum of 2s. 6d. for each child. This sum was considered as an inducement to the adoption of the practice by parents who might

not wish to be considered as paupers, although they might be afraid of the expence of employing a regular medical practitioner. Public amusements.

Besides these already mentioned, a variety of sums of money have at different times been lodged with the magistrates and incorporations of the city, as a fund of perpetual charity, and are accordingly administered according to the will of the granters. Glasgow is also understood to contain between forty and fifty associations entered into by individuals of different descriptions, with the view of contributing from their earnings a sum wherewith to support themselves in case of old age or sickness, or for the relief of their widows and infant children. All the incorporations of the city likewise have established funds of lesser or greater importance for the support of their poor. The voluntary associations, however, or friendly societies as they are called, possess this advantage over those more ancient or regular establishments, that whereas an individual cannot be a member of more than one incorporation, he may become a contributor to several societies, and participate in the benefits derived from all.

PUBLIC AMUSEMENTS.

A THEATRE was first erected in Glasgow in the years 1752 and 1753. If that institution had been coldly received at Edinburgh, where the luxury of the kingdom has always been concentrated, and where a numerous body of nobility and gentry, and men of letters, gave it countenance, it could scarcely expect a tolerable reception in a commercial or manufacturing town, filled with a busy population, drawn together from the districts inhabited by the most zealous of the Scottish presbyterians. The first theatre was a wooden building, erected near the Cathedral, in Theatre

Public amusements.

an area called the Castle-Yard, in contact with one of the old walls of the bishop's castle or palace. Diggs, Love, Stamper, and Mrs Ward, acted in this theatre. The common people regarded it with horror; which was augmented by the orations of the celebrated itinerant methodistical preacher, Whitefield. A mob of weavers at one time attacked the house, but did not succeed in destroying it. In 1762, a number of gentlemen in Glasgow having resolved to erect a regular theatre, ground was feued for the purpose from Mr Miller of Westerton. A subscription was opened; and after some delay a house was built at an expence amounting to L. 1500, and in spring 1764 the exhibitions were appointed to begin. The company at Edinburgh agreed to act here; and among the performers was Mrs Bellamy. Here again the popular prejudices interfered. Before the arrival of the night fixed for opening the house it was set on fire, and was with much difficulty preserved from total ruin. The stage was burned, together with the wardrobe and apparatus. Mrs Bellamy says, in the history of her life, that she here lost her whole wardrobe, worth at least L. 900. It contained a complete set of garnets and pearls. On this occasion a methodist preacher was the cause of the mischief. He told his hearers in his sermon, that the preceding night he dreamed he was in hell at a grand entertainment, at which all the devils were present; and that Lucifer their chief gave for a toast the health of the gentleman who had lately sold his ground to build them a house upon, alluding to Mr Miller, from whom was obtained the ground on which the theatre stood. By this and similar traits of eloquence, the preacher so inflamed his hearers, that they hurried in a mass to the theatre, and set it on fire; but, as already mentioned, the destruction was incomplete. A temporary stage was fitted up, and the house was opened. From that

time the Glasgow theatre continued to be occupied occasionally by the same company that acted at Edinburgh. Under different managers the business of the theatre was conducted till the 5th of May 1780, when the house was burnt to the ground. How this fire happened was never known; but there was little reason for regarding it as accidental. There had been no fires in the house for two days; and the flames first issued from the end on which the galleries are placed, in which no fire is ever kept. Public amusements.

In the following year Mr Jackson, manager of the Edinburgh theatre, built a new theatre at Glasgow, which was opened in January 1782; but at length, ten years thereafter, in consequence of the rapid increase of the city, and the growing fondness for this amusement, a resolution was adopted to erect a new theatre. For this purpose a subscription was set on foot at L. 25 for each share, and L. 7000 was speedily subscribed. A patent was obtained, and a theatre built under the inspection of a committee of the subscribers. The theatre which was burnt down, as already mentioned, stood in the street called Union Place, on the north side of Argyle Street, opposite to Jamaica Street. Mr Jackson's theatre stood in Dunlop Street, on the south side of Argyle Street, nearly opposite to Miller Street. The present theatre has been erected at the head of Queen Street, which proceeds at right angles northward from Argyle Street, westward from Millar Street. The theatre is on the west side of Queen Street. Its form is that of a parallelogram. The extent of its front towards the street is 70 feet; but it extends backwards to the west 158 feet. It is accounted the largest provincial theatre in Britain. Its front towards the street is of polished stone; it is extremely light and elegant. The plan was given by Mr David Hamilton architect.

Public amusements.

Every part of the work has been finished in the most splendid manner.

Assemblies.

Assemblies for dancing have long been held weekly during winter in Glasgow. Card assemblies have been attempted in rotation with the dancing assembly, but with little success. The present assembly-room was first opened on the queen's birth-day 1798. The company on that occasion amounted to 350; and the number present on similar occasions has amounted to an additional hundred. On such occasions the ladies formed by far the least numerous part of the company. The building in which the assemblies are held stands on the north side of Ingram Street, which, as already mentioned, is in the New Town, and parallel to Argyle Street; the building is very elegant. Its front is adorned with four Ionic columns, and their corresponding pilasters. It is lighted in the principal story by three large Venetian windows; the great room is eighty feet in length, thirty-five in breadth, and twenty-seven in height. Galleries for the musicians are placed in each end of the room, and the whole is highly ornamented. A few years ago, an attempt was made to establish a subscription-concert after the nature of that which so long existed at Edinburgh; but it was soon abandoned, although not till some eminent performers had been brought to Glasgow. The concerts are now conducted by professional men for their own emolument during each winter. They are held in the great assembly-room.

Sacred music society.

A society has been formed in Glasgow for the encouragement of sacred music. It consists of subscribers to the institution. Six public meetings are held during the winter, together with weekly rehearsals. The town-council has authorised them to hold their meetings in the choir of the Cathedral; and here, as formerly mentioned,

they have erected an organ, which was built by Mr Donaldson of York. Public amusements.

There is in the city a club that play at bowls, and have a green in the upper part of the town, at the back of the old alms-house or trades-hospital. Another bowling-green is kept by an individual in the Calton for the amusement of the public and his own emolument. The golf is also practised here at the side of the river upon Glasgow green; but this amusement is not so much a favourite in the western as in the eastern side of Scotland, on account of the frequent rains, which render it inconvenient. Bowls, golf, &c.

During winter, when the Clyde is covered with ice, skating is a general amusement among the young people. Curling is also practised, though not so generally as in the country parishes to the eastward; but a club for that purpose exists: and it may be added, that of the social institutions called *mason lodges*, there are fourteen in Glasgow. A few years ago, also, a riding school has been established at the western part of the town in York Street.

MUNICIPAL INSTITUTIONS.

The city of Glasgow is governed by a town-council, consisting of a provost, five bailies, a dean of guild, a deacon-convener, a master of works, and twenty-three council-men, twelve of whom are merchants, and the remaining eleven belong to the incorporated trades. The government of Glasgow, in former times, belonged to the bishop or his deputies; and the whole of the town's charters were granted in favour, not of the inhabitants, but of the bishop. In 1172, William, surnamed the Lion, erected Glasgow into a royal borough in favour of Joceline, then bishop of Glasgow. Not satisfied with this, bishop Turnbull obtained the city and barony of Glasgow to be Ancient government.

Municipal institutions.

erected in 1450 by James the Second into a regality in favour of the bishop and his successors. The bishops, to secure the obedience of their vassals, usually appointed powerful nobles to hold the office of their bailies of regality. The Dukes of Lennox long held it; and in 1621 that family obtained an irrevocable right to the office. The Duke of Lennox afterwards resigned it to the crown; and during the first half of the late century, the king was accustomed to appoint a bailie of regality, but has since ceased to do so. In 1611, James the Sixth granted a charter, erecting the city into a royal borough; and in 1636 Charles the First granted another charter, authorising the magistrates to appoint a bailie on the river Clyde, with maritime, civil, and criminal jurisdiction from Glasgow bridge to the Cloch, a place about four miles below Greenock. This magistrate is commonly called the *water bailie*. Anciently the magistrates of Glasgow were elected by the archbishop or lord of regality, till by a statute in 1641 the citizens were empowered to nominate their own magistrates, excepting that they were bound to present a list of three men annually to the Duke of Lennox, and out of this list he nominated the provost. This privilege, however, was lost upon the restoration of episcopacy in 1662, when a new archbishop was appointed with all the privileges competent to his predecessors. At the revolution, King William, with the advice of his privy-council, authorised a new and free election of the bailies and council by poll of the burgesses, and empowered the magistrates and council to elect the provost. Afterwards, by an act of parliament in 1690, the town-council got the power of choosing their own magistrates, and other officers of the borough, as fully and freely as the city of Edinburgh or any other royal borough. The form and manner of this election by

the town-council has since varied according to the different *sets* or constitutions adopted by the council at different periods. In 1711 the former set underwent some alterations, which were confirmed by the convention of royal boroughs. In 1748 another set was adopted, and agreed to by the council, merchants and trades houses; and being confirmed that year by the convention of royal boroughs, forms the present set or form of government. The election takes place in the following manner. Upon the first Tuesday after Michaelmas, the magistrates and council convene to elect a provost and three bailies. The provost and two of the bailies are merchants, and the third of the bailies belongs to the incorporated trades. The merchant rank or company is divided by the magistrates into four lots, or leets as they are called, from each of which one is chosen; out of these four, by a second vote, two are chosen; and of the two, one is named by a vote of the council to the office of provost. By a similar mode of election the two merchant-bailies are chosen. From the trades-counsellors the trades first bailie is elected. By a like sort of election a third merchant-bailie and another trades-bailie are chosen. The election of the town-council takes place on the succeeding Friday. The magistrates for the three preceding years are the electors; that is, the provost and bailies; and the number is always completed to eighteen, whom they elect out of their proper ranks of merchants or trades. The dean of guild, or head of the merchants, is annually elected by the magistrates and town-council and the deacons of different trades, with a sufficient number of merchants to equalize the merchants and the trades. Every person who settles in the city as a merchant must become a member of the merchants house or company. To do so, he must first be admitted a burgess of the city, and pay L. 10 to the mer-

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chants-house; the price of being admitted a burgess is to a stranger L. 8 : 7 : 10½. The sons and sons-in-law of burgesses, or those who have served apprenticeships in the city, pay different sums, in no case amounting to more than L. 1 : 15 : 10. The different incorporations are the following: Hammermen, tailors, cordiners or shoemakers, maltmen, weavers, bakers, skinners, wrights, coopers, masons, fleshers, gardeners, barbers, dyers, and bonnet-makers. They are represented unequally by fifty-six members in what is called the trades-house; and this trades-house elects a list of three persons, out of whom the magistrates and council, along with fourteen members, chosen by the merchants-house and the deacons or presidents of each of the incorporate trades, elect one who is deacon-convener. Upon the whole, therefore, by this constitution, which we have stated very shortly, and without giving a detail of the mode of election, the magistrates and council do in fact nominate their own successors, or rather the magistrates of the last three years perform this office; that is, the provost and five bailies, amounting to eighteen in number.

Incorporations

The magistrates and town-council of Glasgow also elect a bailie for the suburb on the southern side of the river, called Gorbals, and he usually appoints a resident deputy; they appoint the water bailie annually, and a bailie of Provan. In other respects the magistrates of Glasgow are of little political importance, as they have only a vote along with those of the towns of Rutherglen, Renfrew, and Dunbarton, in the election of a member of parliament.

Armorial bearing.

The armorial bearing of the city exhibits an oak-tree with a bird above; at the foot a salmon, with a gold ring in its mouth; and on a branch on the left side, a bell; the motto, "Let Glasgow flourish." Before the reformation, St Mungo's head mitred was on the right of

the shield with two salmons for supporters. The salmon and the ring in the Glasgow arms are accounted for by the following legend: In the days of St Kentigern, a lady having lost her wedding-ring, it stirred up her husband's jealousy; to allay which, she applied to St Kentigern, imploring his help for the safety of her honour. Not long after, as St Kentigern walked by the river, he desired a person that was fishing to bring him the first fish he could catch; which was accordingly done, and from its mouth was taken the lady's ring; the recovery whereof in this manner effectually took away her husband's suspicion. Municipal Institutions.

The merchants of Glasgow, though they have separate funds, and a majority in the town-council, do not appear to have been ever formally constituted into an incorporation distinct from the rest of the burgesses; but a dispute having, early in the seventeenth century, occurred between them and the incorporated trades concerning their privileges, their disputes were settled by a bond of submission to Sir George Elphinston, then provost, and two of the ministers of the city. In 1605 these arbiters pronounced an award, which is called the letter of guildry, and is admitted by custom to fix the constitution and privileges of the merchants, and the mode of electing the managers of their funds. The incorporated trades possess funds, which are under the management of a deacon, collector, and a certain number of masters; which number is not uniform in the different incorporations. The incorporations of Glasgow are not very ancient. The Hammermen, who seem to be the oldest, have a charter dated 11th February 1536; which proceeds upon the narrative that they existed previous to that date, but that their privileges had not been correctly defined. The incorporation of Weavers were instituted by the magistrates in 1528. Antiquity of the incorporations.

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The incorporation of Bakers have existed for some hundred years. In 1568 the regent Murray bestowed upon this incorporation the lands of Partick, as a reward for their services to his army previous to the battle of Langside. Here the incorporation have excellent mills, capable of grinding 50,000 bolls of flour *per annum*. The incorporation of Fleshers obtained their charter or seal of cause in 1580; and, upon the whole, it would seem that most of the present fourteen incorporations first existed in the end of the sixteenth and beginning of the seventeenth centuries.

Bailie-court.

The city of Glasgow, like other royal boroughs, has a town-court called the *bailie-court*. The summons issued from this court, and the decrees pronounced in it, run in the name of the provost. Its jurisdiction is limited to the territory of the borough, but extends to actions of debt of the highest amount, and to all criminal cases that are not capital. Glasgow has also, like other royal boroughs, a dean of guild court: the business of the dean of guild is to decide disputes between contiguous proprietors concerning encroachments upon their property; to regulate the weights and measures; to take care that new buildings do not encroach upon the streets of the city; and to authorise the pulling down of ruinous buildings, or the repairing of them by the neighbourhood, without allowing the proprietor, in this last case, to claim his property till he pay the expence of the repairs.

Small debt-court, &c.

There is also here held a justice of peace court for the recovery of small debts; and there is likewise held what is called the *court of conscience*, in which the magistrates of the city are judges. It meets every Monday for the determination of small causes brought for payment of sums not above forty shillings. Procurators, neither here nor in the small debt-court, are admitted to plead; the parties themselves stating their own case. Besides these stated

courts, a magistrate attends daily at the council-chamber, for the purpose of discussing such causes as require dispatch, without awaiting the ordinary forms of court. Municipal Institutions.

The Town-house of Glasgow stands at the cross, adjoining to the prison, to the westward of which it is placed: it was built in 1636. The front is supported by strong square pillars connected with each other by arches forming a piazza. The hall is a handsome room fifty-two feet in length, twenty-seven in breadth, and twenty-four in height. There is here a fine portrait, by Ramsay, of Archibald Duke of Argyle, in his robes as lord-justice general. Here also are full length portraits of all our kings since the accession of James the First to the crown of England. The Tolbooth is a well-finished lofty building of five stories. In the angle formed by the High Street and Trongate, upon the east of the prison, is situated a square spire, 126 feet in height, having its roof somewhat in the form of an imperial crown with open arches. Here is placed a fine clock, which regulates the others in the town; also a bell, and a well-toned set of musical chimes that have been long admired. These play an air at the end of every two hours, by means of machinery connected with the clock; and on every particular day of the week the series of tunes is altered. The bells are, besides, played upon by a musician for an hour, betwixt two and three, every day excepting Saturday and Sunday. Town-house, tolbooth, &c.

Within the principal door of the prison is a large square lobby, with many columns supporting the roof. From this lobby, upon the left, strikes off the entry into the town-house, before mentioned as a separate building. Directly opposite, another door leads into the apartments of the prison; which are divided into two different kinds, appropriated for debtors and criminals, well ventilated and

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healthy. On the right of the lobby is the door that leads into a new fitted up and elegant room, where the circuit-court of justiciary is held. Within a niche, on the north of this apartment, are the royal arms; and below, the figure of Justice, holding in the left hand a balance, and in the right a sword.

Immediately before this is the bench for the judges, covered with scarlet. Below, and railed from the body of the room, is the inside of the bar for the lawyers and clerks. On the right of the bench sits the jury; and in the front, beyond the clerk's table, and without the bar, is a row of seats rising gradually upwards, in the front of which is placed the pannel, and the others are left for spectators. Here are also two handsome galleries with iron rails, entering by a turnpike-stair from the lowest or first flat; and in the east end of the room is a very large circular Venetian window, which looks into the High Street. Immediately below the principal staircase that leads into the prison, and in the first story, is another door entering from the street, which opens a communication by the turnpike-stair just now mentioned, with not only the galleries in the circuit-room, but also with the prisoners apartments, and a handsome suite of rooms appropriated for the town-clerk's office, record-rooms, &c. These have been only lately laid out and finished, as before they made no part of the prison, but of an adjoining house situated upon the High Street, which for this purpose was purchased by the community.

Causes of defective police.

When cities were originally established in Europe, they were necessarily of no great extent; and when the inhabitants were incorporated, and a magistracy specially appointed to act as judges and manage their public affairs, the jurisdiction conferred upon these magistrates was of course limited to the territory occupied by the

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town, or at least was never made to encroach upon the lands belonging to the great barons in the neighbourhood. Hence, when a city came to be greatly increased, the additional streets and buildings were considered sometimes as suburbs, and sometimes as a different town, to which a separate constitution was given, as in the case of London and Westminster, Edinburgh and the Canongate, &c.; but in all cases the jurisdiction of the ancient magistrates could not be made to extend, without a special statute, over the new streets and buildings. Thus it has happened, that cities, which to the eye of a stranger, and even in reality, are one and the same, are nevertheless locally divided into separate jurisdictions, or a great part of them have no other magistracy for the management of their affairs than that which is established for the general administration of the adjacent county. This state of affairs has by degrees become inconvenient. In one part of a city, in consequence of the establishment of special magistrates, and their vigilant conduct, the streets are well lighted, well paved, kept clean, offenders against the peace instantly apprehended and punished; while, in another quarter of the same city, the reverse of all this is the case. No adequate funds are contributed for the purposes above mentioned, or the magistrates of the county, being sufficiently occupied in other affairs, have no leisure for that strict vigilance which is frequently necessary for the preservation of order among the crowded population of a large city. Hence it has of late been found necessary, in some measure, to incorporate anew the great cities, that is, to convert them and their suburbs into one community, electing magistrates, and levying funds for the management of their general police. On account of the irregular and partial modes in which the magistrates of royal boroughs are generally elected, and on account of

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their being under no responsibility in case of dilapidating the funds entrusted to them, it has been found improper to confer upon them exclusively the new powers of general police thus created; only a certain share of these powers, therefore, is usually bestowed upon the ancient magistrates, while the rest is conferred upon deputies elected by the different districts of the city.

Police established.

Glasgow laboured under all the inconveniences resulting from the want of a general police till the year 1800; when, after many disputes, its inhabitants at length became sensible of the necessity of adopting joint measures for that purpose. An act of parliament, accordingly, was obtained in the year 1800 for this purpose; which, besides extending the old royalty over a considerable additional territory, created a system of police, the management of which was vested in the provost, bailies, dean-of-guild, deacon-convener, and twenty-four commissioners; one elected by each of twenty-four districts into which the whole city and suburbs were divided. The commissioners are elected by such inhabitants of the wards or districts as occupy property valued at a yearly rent of L.10 or upwards. The qualification to be a commissioner is, that he occupy a dwelling-house, exclusive of shops or warehouses, valued at L.15 or upwards of yearly rent. Each commissioner is head-constable within his ward. Eight of the commissioners, on the second year of the establishment, were ordained to go out by ballot; and the third year another eight commissioners were required to go out by ballot. Thereafter eight commissioners annually were ordained to go out by seniority; but they are capable of being re-elected; in which case they are considered as youngest commissioners. The whole commissioners, that is, the magistrates and commissioners from the wards, are empowered, on the first Monday of September annually, to impose an assessment upon all occupiers of

buildings, for carrying into effect the object of the institution, and to appoint officers to levy and pay away the money. An absolute majority of the whole commissioners must be present when money is voted, or watchmen or other servants appointed; but, on other occasions, the attendance of seven commissioners is declared sufficient. Quarterly meetings are ordained to be held; and these may be adjourned by the meeting, or the provost or senior magistrate of the city may call extraordinary meetings. The commissioners are authorised to appoint the following officers: A master of police, clerk, collector, treasurer, and surveyor, besides fifteen officers and seventy-four watchmen; and in them, under the managers of the institution, is the executive power more immediately vested. Their duty may be summed up in the following words: Municipal Institutions.

It consists in aiding and assisting the magistrates in detecting and bringing to justice persons guilty of street-robberies, house-breakings, assaults, theft, reset of theft, shop-lifting, picking pockets, swindling, and other crimes of that nature; by causing the person accused to be apprehended, imprisoned, and proceeded against, in terms of law; in apprehending and putting the law into execution against vagabonds, idle and disorderly persons, and public and sturdy beggars, and other persons who follow no lawful employment or occupation; in suppressing disorderly public-houses, and other houses frequented by persons of the foregoing description; in suppressing mobs and riots; in assisting to extinguish fires; in putting the laws into execution, by which carters, owners and drivers of carts and other carriages, are prohibited from leaving the same on the streets, roads, and passages, and riding on their carts and carriages, and driving them, or horses or other cattle, furiously or improperly on the streets; in seeing Duties of the police officers.

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that the said streets, squares lanes, passages, and other places, are properly lighted and cleaned; in keeping in good order the public markets of the city, and the persons dealing therein; in guarding, patrolling, and watching the streets; and doing whatever else is necessary towards assisting the magistrates in preserving the peace and good order of the city. The watchmen have each a particular part of the street allotted to them. They begin their watch from April to September inclusive at ten o'clock at night. and continue until five in the morning; and from the month of October to March inclusive at nine o'clock at night, and continue until six in the morning. Every half-hour the watchman goes through his range and calls the hours. It is declared competent by the act to the town-council, merchants-house, and trades-house of the city, or any one of them, to bring actions against the commissioners for the time being, or a majority of them to bring actions against their predecessors in office, before the courts of session or exchequer, in case they shall embezzle, squander, or misapply, any of the funds vested in them, provided that such actions shall be commenced within twelve calendar months after the offence prosecuted for shall be alleged to have been committed. A magistrate attends daily for inquiring into and punishing offences committed against the laws of police. The effect of this system of police has been highly beneficial with regard to its great objects, which consists of guarding, lighting, and cleaning the streets.

Guard-house.

The city of Glasgow is accommodated with a guard-house, in which also the police-office is kept. It was ereeted in 1789 in the street called the Candleriggs. It consists of a piazza, supported by four Ionic pillars in front, behind which is the guard-room. The upper story is occupied partly by apartments for the officer on guard,

and partly by the police-office; for the accommodation of which last additional apartments have also been built. In the year 1789 a new Bridewell was also erected in Glasgow. It stands in George Street, near the Drygate. It consists of a building of six stories in height, 106 feet in length, and 30 in breadth, with two wings. A gallery in each story runs the whole length of the house, and from it the places of confinement branch off. The places of confinement or cells are 126 in all, being 21 in each story. They are eight feet in length, and seven feet in breadth. The prisoners are confined apart from each other, and employed in such kinds of work as they are qualified to perform. The whole is under the management of a keeper, superintended by a committee of the magistrates. Municipal institutions.

The justiciary-court sits at Glasgow twice in the year upon its circuit. There is here also a sheriff-court and commissary-court. The practitioners before these courts and before the magistrates or bailie-courts, commonly called procurators, had for some time been united into a club or association, which raised a fund for their decayed members, and widows and children. They obtained a royal charter in June 1796, under the name of the *Faculty of Procurators*, erecting them into an incorporation, with power to make bye-laws, and to sue and be sued as a body-politic. Under this charter the society is governed by a dean of faculty, a council of five, a treasurer, fiscal, and clerk. It has annual meetings upon the third Friday of May and the same day of November. At the meeting in May the office bearers for the succeeding year are elected. The dean and council have also monthly meetings; and the dean has power to call meetings on twenty-four hours notice. To obtain admission into the faculty, it is necessary that the candidate have served a regu- Faculty of procurators.

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lar apprenticeship of five years with one of the members practising before the courts in this city, and a further term of at least one year as a clerk, either with the practitioners here, in the court of session, or any other proper court of law; and further, that he must be of twenty-one years of age, and have attended the Scots law-class, in any of the universities in Scotland, for at least one session, besides being of a good character and deportment. The apprentice-fee, which is due and must be paid at the entry of the apprentice to his indenture, is for the son of a member L.25, and for every other person the sum of L.50.

Markets.

The city of Glasgow is supplied with a more complete set of markets than is any where else to be found. The Weighhouse is placed adjacent to the Ram's Horn or North-West Church; it is of a square form, adorned with pilasters. The markets in King Street are much admired. They stand on both sides of the street; that appropriated to beef, on the east side of the street, is 112 feet in length and 67 in breadth, with a gate in the centre. The incorporation of fleshers have a hall at the end of this market, where they meet to transact their public business. On the opposite side of the same street are a set of markets in three divisions, appropriated to fish, mutton, and cheese. The front of the whole towards the street is 173 feet; their breadth is 46 feet; the whole of them are paved with free-stone; and for shelter, have roofs standing upon stone pillars, forming coverings, beneath which the meat is exposed to sale. These markets are always kept extremely clean, by means of water obtained from wells placed in their areas. The green-market, which stands in the street called Candleriggs, is 130 feet in length in front. The entries to all these markets are through gates either arched at the top or ornamented

by Ionic columns. Adjoining to the Weighhouse, new markets have been erected for the sale of oat-meal, butter, and cheese; but the old Meal-Market still remains in the High Street nearly opposite to the College. These markets near the Weighhouse are neat and spacious. The slaughter-house or shambles is adjacent to the river, at the foot of the Gallowgate Burn, and is consequently placed in the most convenient situation that could well have been selected. Municipal Institutions.

During the late war, that is, during the war of the French revolution, the city of Glasgow raised two regiments of volunteer infantry. A troop of volunteer cavalry was also raised. During the present war several similar volunteer corps have been raised under different denominations: *1st*, What is called the First Regiment of Glasgow Volunteers, commanded by the provost for the time; *2d*, A Corps of Sharpshooters, amounting to nearly 500 in number; *3d*, The Armed Association; *4th*, The Trades Battalion; *5th*, The Grocers Corps; *6th*, The Highland Corps; *7th*, The Anderston Volunteers; and, *lastly*, A Troop of Volunteer Cavalry, who provide their own horses, arms, and accoutrements, and serve without pay, as most of the other corps do. They amount in all to 3000 effective men. Military institutions.

In 1795, government erected barracks in the city of Glasgow, for the accommodation of a body of regular troops, without being under the necessity, as formerly, of billeting them upon the houses of the inhabitants. As formerly noticed, they are adjacent to the street called the Gallowgate, at a considerable distance from the centre of the city. They consist, as at Edinburgh and elsewhere, of three principal compartments or buildings; two of which stand at right angles to the third, leaving a spacious court in the centre. The middle building, to which the other two Barracks.

Military Institutions.

form wings, is four stories in height and well executed; it contains the apartments for the officers, with their mess-room, &c. The wings are of the same height with the principal or front building. They are divided into seventy-two apartments, each of which contains fourteen men. For the use of every forty-two men a kitchen is allotted in the ground-story. The barracks are divided from the street by a wall; immediately behind which the guard-house is situated. The gates are shut every night at nine o'clock.

COMMERCE AND MANUFACTURES.

THERE are not in Glasgow many public institutions for the encouragement or support of manufactures or commerce. These have grown up, as they ought always to be permitted to do, in consequence of the efforts of individuals pursuing their own prosperity under an impartial administration of justice; by means of which every man is enabled to look forward to the independent and secure enjoyment of whatever property he can acquire.

Chamber of commerce.

The Chamber of Commerce was incorporated by royal charter in 1783, upon the application of a mercantile association. It consists of traders and manufacturers residing in Glasgow, Paisley, and Greenock. It has two general meetings annually, on the first Tuesday of January and the first Tuesday of July. At the first of these meetings, thirty directors, called the *chamber of directors*, are chosen; and the directors elect a chairman, deputy-chairman, and secretary, from among the members of the incorporation. The directors hold four general quarterly meetings, on the second Tuesday of the months of January, April, July, and October. The fees of admission are L. 5, 5s.; and a contribution is due of L. 1, 1s. annually.

The business understood to be committed to the chamber of commerce consists of giving countenance and aid to whatever plans may seem beneficial to the general commerce of the country, or to the commerce of the west of Scotland in particular; to give weight to applications relative to trade and manufactures which it may be found necessary to make to the king's ministers, to parliament, or to the board of trustees, for procuring redress of any grievance or inconvenience affecting commerce; to attend to the corn-laws which are from time to time enacted, and to watch over their effects upon the commercial interests of the kingdom. This body of men, by their prudent conduct and attention to the objects of their institution, have repeatedly been of much service to the community. Commerce and Manufactures.

There is also a board of commissioners upon the river Clyde, established by act of parliament, for the purpose of deepening the river. They are thirty-four in number. They meet annually, on the first Tuesday of July, in the town-clerk's chamber of Glasgow. Their funds consist of a tonnage upon the shipping. They continue the operations of dragging, and of erecting dikes and jetties for the purpose of deepening the river. Vessels of ninety tons burden now often arrive, as already mentioned, at the quay at the Broomielaw. The tides, at a medium, rise seven feet there. As there appear to be no rocks or great stones in the bed of the river, a hope is entertained that it may be brought to a general depth of ten feet, and by continued industry retained at that depth. The tonnage-dues entrusted to the commissioners amounted, for the year ending in July 1771, to the sum of L.1021 : 5 : 1. They have continued gradually to rise. In 1793 they amounted to L. 3205, and in 1804 to the sum of L.4759, 0s. 4d. A debt of L.50,000 was originally contracted, but it is now much reduced. Commissioners on the river Clyde.

A committee for the management of the navigation

Commerce and Manufactures.

across the peninsula between Forth and Clyde, to be afterwards mentioned, meets regularly at Glasgow. There are also several banks established in Glasgow for the accommodation of commerce. That first established was the Old Bank, or Ship Bank, which has its office in Argyle Street. It was opened in 1749. In 1761 the Thistle Bank commenced business; its office is in Virginia Street. The Royal Bank of Scotland, which was formerly mentioned, has a branch established at Glasgow; its office is in St Andrew Square. This branch was opened in 1783; and it is supposed that at least as much business is done by the branch in Glasgow as by the principal bank itself in Edinburgh. A variety of banks also have branches in this great city; *viz.* the British Linen Company, the Greenock Bank, the Falkirk Bank, the Paisley Bank, the Paisley Union Bank, the Leith Bank, the Perth Bank, the Renfrewshire Bank, the Air Bank. A mail-coach daily leaves Glasgow at two o'clock afternoon, and usually reaches London in sixty-three hours. The arrivals at Glasgow from the metropolis are in the morning. There is a communication by mail-coaches with Greenock twice a-day, and with Air once each day, as well as with Edinburgh. A penny post-office has likewise been established, which conveys letters to the different quarters of the town four times each day.

Banks.

Tontine coffee-room.

We may here take notice of an establishment which, in a city like Glasgow, may with propriety be considered as chiefly subservient to commercial views, and in that respect as highly useful. We allude to the general coffee-room of the city, which forms a place of meeting to which, in all seasons, the principal inhabitants resort, and by which that intercourse between them is conveniently maintained, which must always be of the utmost importance to commercial men, to whom a general acquaintance with

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whatever is passing in the world must always be of great value. The establishment commenced in the following manner: In the year 1781, with the view of erecting a great inn or hotel, and a coffee-room to be connected with it, a subscription was opened by way of tontine for erecting the buildings. It was agreed that the produce or rent of the buildings should be distributed amongst the subscribers according to the endurance of any life they should propose at the time of subscription; and thus annually, till such time as only one of the original nominees was in existence; when the whole buildings were to become the property of the original subscriber or his heirs, and which he or they could sell or dispose of at pleasure. This tontine was divided into 105 shares at L.50 each. The subscription, on the terms now mentioned, were speedily filled up, and the buildings were immediately erected, adjoining to the townhouse upon the north. The coffee-room is the most remarkable part of the building. It is no less than 72 feet in length and of a proportional breadth, and is undoubtedly the most elegant and spacious apartment of the kind that is any where to be found. Its principal entry is under the piazza of the town-house; upon each side of the door are placed two very large windows from the floor to the roof, which communicate light to the room from the street. About half way down the coffee-room is a very large Venetian window upon the east; and upon the other side, exactly opposite, is another looking into the bar; upon the north side of which is a door communicating with the hotel. The extremity of the room northward is in the form of a semicircle, divided by pillars, making one complete magnificent window from side to side. Near to the main entry, the roof, which is very high, is supported by columns of the Doric order with correspondent

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pilasters upon the walls; and in this place a dome of glass enlightens, with the other end windows, the south side of the room. From the roof, also, are hung several magnificent lustres, finely gilt, which when lighted give an air of grandeur to the place. The room is furnished, for the use of the company who frequent it, with a book stating daily the arrivals and departures of all vessels connected with the city. Here also are received the whole Scottish newspapers, and the greatest part of those published in London, with several from Ireland, France, &c. together with magazines and other periodical publications. At the arrival of the mail, a scene of great bustle, to get hold of the newspapers, frequently takes place, which is amusing to a stranger. Tobacco is not allowed to be smoked, nor liquors drank, in the room. The profits of the establishment arise from the subscriptions of those by whom the room is frequented. Subscribers of L.1, 5s. *per annum* are entitled to the use of the room, and of all the variety of newspapers and magazines with which it is supplied. The subscribers usually amount in number to between 900 and 1000. The hotel, which forms a part of the same building, consists of a suite of apartments handsomely fitted up, and connected with it by a fine hanging stair. The tontine coffee-room and hotel produce at present a rent to the proprietors of upwards of L.900 *per annum*. Of the original shares, twenty-one have now fallen into the common fund, in consequence of the death of that number of persons nominated at the time of the subscription.

Origin of the Glasgow commerce.

The ruin of the wealthy Roman Catholic clergy who resided in Glasgow appears to have been the first circumstance which compelled the citizens to seek subsistence by means of commerce. It is known, however, that they had ships previous to the reformation; because an order

of the privy-council, dated in 1546, prohibited all Scottish vessels, and among the rest those belonging to Glasgow, from making war against the English. As nothing more is known of the navigation of Glasgow about that period, it could not be considerable, and in all probability consisted only of a few small vessels employed in importing such luxuries as might be wanted by the wealthy clergy who resided here, or perhaps in exporting fish from the river. After the inhabitants of Glasgow were deprived of the support which they derived from the expenditure among them of the great ecclesiastical revenues, and were under the necessity of turning to other branches of industry, the staple commodity which they exported consisted of salmon, which then abounded in a great degree in the Clyde; and this fishery, in the end of the fifteenth and beginning of the sixteenth century, together with that of herrings, was prosecuted with considerable success by the inhabitants of this city, as well as of the boroughs of Renfrew and Dunbarton. Their principal market was France; from whence in return they imported considerable quantities of brandy, salt, and wine; they also imported iron from Sweden. In the reign of Charles the Second, a privateer was fitted out in the Clyde to cruize against the Dutch. During the reign of the same monarch, a mercantile society was formed in Glasgow with the view of monopolizing the fishing trade; and the king actually took a share in the concern, and granted to the company a monopoly of the fishery during a particular period of the year, being that in which it was most profitable. The company existed from 1670 to 1684, when it was abolished. They built at Greenock, for curing and packing their fish, some houses called the Royal Close, which at the dissolution of the company were bought by the town-council of Glasgow. About the same time

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a company engaged in the whale-fishing, and had two ships, the one of 700, and the other of 400 tons burden. They appear to have been unfortunate; their vessels were built at Belfast. One of the most enterprising merchants at that time was Walter Gibson, who is recorded to have exported in 1698, in a Dutch vessel, 300 lasts of herrings, each containing six barrels. In France he got a barrel of brandy and a crown for each barrel of herrings. The vessel returning laden with brandy and salt, he made a great profit by the cargo. Being a man of spirit, he purchased that and two other large vessels, and set to his fellow-citizens an example of extensive traffic to the different ports of Europe. By the time that the revolution took place in 1688 commerce had taken root in Glasgow, and its inhabitants adventured deeply in the unfortunate attempt to settle a colony at Darien.

Effect of the union on Glasgow.

The legislative union with England in 1707, which proved ruinous to the commerce of the eastern ports of Scotland, by depriving them of a great part of their trade with France, was the commencement of enlarged views and more extensive commerce to the city of Glasgow, by opening the trade to the British colonies in North America and the West Indies. At first they were under the necessity of hiring English vessels to carry on their trade. In these they sent out cargoes of goods for the use of the colonies, and returned home laden with sugar and tobacco, but chiefly with the last of these articles, which at that time had become a general object of consumption in Scotland. It was not till 1718 that the first Glasgow vessel crossed the Atlantic. The Glasgow merchants found materials for this commerce; that is, they found goods wanted by the colonists, in consequence of the introduction of manufactures into the city and neighbourhood. The Reverend Mr Ure, in his History of Rutherglen and East Kilbride,

gives the following account of the origin of the manufactures of Glasgow. "The name of *Flakefield* took its rise from a place called Flakefield, in the upper part of the parish of East Kilbride. About the middle of the last century, two young men of the name of Wilson, the one from Flakefield, and the other from its neighbourhood, went to Glasgow and commenced merchants. The sameness of the name had occasioned frequent mistakes in the way of their business. To prevent this, the one was, for the sake of distinction, in a short time known from the other by the *cognomen* Flakefield, the place of his birth. His real surname soon became obsolete, and he was afterwards called by the name of Flakefield, which, in place of Wilson, has descended to his posterity.

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Origin of the Glasgow manufactures.

Flakefield.

"To this man's son the city of Glasgow is in a great measure indebted for her present opulence and trade. I hope it will be thought not altogether foreign to our design to mention the circumstance by which this was brought about. Wilson, *alias* Flakefield, put one of his sons to the weaving trade. The lad, after having learned his business, enlisted, about the year 1670, in the regiment of the Cameronians, but was afterwards draughted into the Scottish Guards. He was during the course of the wars sent to the continent, where he procured a blue and white chequered handkerchief, which had been woven in Germany. A thought struck Flakefield, that were it his good fortune to return to Glasgow, he would attempt to manufacture cloth of the same kind. Accordingly he preserved with great care a fragment sufficient for his purpose. Being disbanded in the year 1700, he returned to his native city with a fixed resolution to accomplish his laudable design. Happy would it be for mankind, were travellers into foreign countries to pick up what might be useful in their own, and, like this praise-

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worthy soldier, return home possessed of some valuable acquisition. A few *spindles* of yarn fit for his purpose was all at that time William Flakefield could collect: the white was but ill bleached, and the blue not very dark; they were, however, the best that could be found in Glasgow. About two dozen of handkerchiefs composed the first web. When the half was woven, he cut out the cloth, and took it to the merchants, who at that time traded in salmon, Scottish plaiding, hollands, and other thick linens. They were pleased with the novelty of the blue and white stripes, and especially with the delicate texture of the cloth, which was *thin set* in comparison of the hollands. The new adventurer asked no more for his web than the neat price of the materials and the ordinary wages for his work. All he asked was readily paid him, and he went home rejoicing that his attempts were not unsuccessful. This dozen of handkerchiefs, the first of the kind ever made in Britain, were disposed of in a few hours. Fresh demands were daily made on the exulting artist for more of his cloth, and the remaining half of his little web was bespoken before it was woven. More yarn was procured with all speed, and several looms were immediately filled with handkerchiefs of the same pattern. The demands increased in proportion to the quantity of cloth that was manufactured. Some English merchants, who resorted to Glasgow for thick linens, were highly pleased with the new manufacture, and carried for a trial a few of the handkerchiefs to England. The goods met with universal approbation. The number of looms daily increased; so that in a few years Glasgow became famous for that branch of the linen trade. A variety of patterns and colours was soon introduced. The weavers in Paisley and the neighbouring towns engaged in the business; and the trade was at length carried on to a great

extent. Thus from a small beginning a very lucrative and useful branch of business took its rise, and which has been the means of introducing others still more extensive. The checks were followed by the blunks, or linen cloth for printing; and to these is now added the muslin trade, which at present extends to the amazing sum of nearly two millions Sterling *per annum*, and Glasgow is universally acknowledged to be the first city in Scotland for manufactures. But neither William Flakefield, nor any of his descendants, ever received any reward, or mark of approbation, for the important services done, not only to Glasgow, but to the nation at large. Flakefield, however, having during his service in the army learned to beat the drum, was in his *old age* promoted to the office of town-drummer; in which office he continued till his death." Commerce and Manufactures.

After the year 1718, in which, as already mentioned, the first Glasgow vessel crossed the Atlantic, the tobacco trade came to be in a most prosperous condition; and hence it so much excited the jealousy of the merchants in London, Bristol, Liverpool, and Whitehaven, that they entered into a combination for the discouragement, if not the ruin of it. For this purpose they accused the merchants of fraud against the revenue, first before the commissioners of the customs at London, afterwards by petition to the lords of the treasury; and when both these failed, by a direct application to the house of commons. Though no fraud against the revenue could be detected, yet the powerful influence of the English merchants prevailed; and new officers having been appointed at Greenock and Port Glasgow, in whose power it was to seize and harass the merchants, their scheme became successful, and the trade languished and declined till about the year 1735. At this period it again revived, though not with its former vigour; the number of vessels belonging to Clyde, and at Jealousy of English merchants.

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that time trading to America, the West Indies, the ports in the Mediterranean, Baltic, Ireland, and the different towns upon the coast of Britain, being only 67, and their burden about 5600 tons. Between this period and the year 1750 the trade of Glasgow advanced, however, but slowly; and though the merchants then began to establish factors in America, and to increase the extent of their dealings, by disposing of the goods they sent out upon credit; yet the risk was thereby rendered infinitely greater than it had been before, and the trade more speculative and uncertain. Still, however, the trade prospered. During the war which terminated in 1763, one merchant in Glasgow, Mr John Glassford, was proprietor of twenty-five ships with their cargoes, and traded for above half a million Sterling yearly. In the year 1772, out of 90,000 hogsheads of tobacco imported into Britain, Glasgow alone engrossed 49,000. In the year 1775 this branch of trade attained its greatest height. In order to give an idea of its extent at that time, we have here subjoined a short abstract of the principal imports in the year 1775.

State of trade before the American war.

Tobacco from Virginia	40,858 hogsheads
from Maryland	15,040
from Carolina	1,249
Total	57,143
Sugars from Jamaica and the other West India islands	4621 hogsheads, 691 tierces, 462 barrels
Rum	1154 puncheons, 193 barrels
Cotton	503 bags

The American war, as formerly noticed, proved extremely ruinous to Glasgow. All commercial intercourse

was put a stop to betwixt Britain and that country; and as the fortunes of most of the merchants were embarked in that trade, and America deeply indebted to them, it proved the ruin of many who before had reckoned themselves possessed of independent fortunes. Though the commerce of the city was thus interrupted, yet the spirit which had been raised was not extinguished. The merchants began to look out for new objects of industry; and accordingly extended their commerce to the West Indies and the continent of Europe considerably more than before; and though the shipping at the time of the greatest extent of the American trade was more than at present, yet it now appears to be actually on the increase: for though at the commencement of the contest with the colonies, many of the merchants who embarked in the American trade were ruined, yet there were others who, from having a large stock of tobacco on hand, and a fortunate rise at the time in the price, were enabled to launch out into other branches of trade, particularly manufactures. These having proved successful, and furnishing such useful articles of export, together with the termination of the war with America, may be reckoned the principal causes of the revival of the commerce of Glasgow, as well as of the ports of Greenock and Port Glasgow, with which it is so intimately connected. That the commerce has, since the period above alluded to, been gradually increasing here, will appear from the following states, with the exception of one or two years. In 1783 the number of ships belonging to Clyde were only 386, and their tonnage 22,896; whereas in 1790 their number was 476, and their tonnage 46,581. In two years thereafter, the registered vessels belonging to Glasgow, Port Glasgow, and Greenock, were 464, and their tonnage 46,806 tons.

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Misfortunes from the American war.

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From the customhouse books it appears, that in the year 1796 there were employed the number of vessels in the list subjoined in the trade of the river; *viz.*

Shipping at different periods.

From 5th January 1796 to 5th January 1797,

AT GREENOCK,

110 ships, 13,797 tons.

AT PORT GLASGOW,

45 ships, 5323 tons.

Total, 155 ships, 19,120 tons.

That this number has greatly increased will be obvious from the following statement of the shipping from 5th January 1803 to 5th January 1804.

AT GREENOCK,

Inwards,

Foreign trade, 496 ships, 53,546 tons, 5183 men.
Coast and fishing, 730 vessels, 35,532 tons, 3147 men.
Total, 1130 ships and vessels, 87,078 tons, 6330 men.

Outwards,

Foreign trade, 352 ships, 50,366 tons, 3673 men.
Coast and fishing, 1016 vessels, 43,009 tons, 3326 men.
Total, 1368 ships and vessels, 93,375 tons, 6999 men.

AT PORT GLASGOW,

Inwards,

Foreign trade, 113 ships, 18,722 tons, 1081 men.
Coast and fishing, 182 vessels, 7226 tons, 551 men.
Total, 295 ships and vessels, 25,948 tons, 1632 men.

Outwards,

Foreign trade, 177 ships, 25,137 tons, 1692 men.
Coast and fishing, 119 vessels, 7202 tons, 424 men.
Total, 296 ships and vessels, 32,389 tons, 2116 men.
Grand total, 3095 ships and vessels, 238,790 tons, 17,077 men.

Goods exported and imported.

The principal articles of exportation from Glasgow, and the ports farther down the river, to America and the West Indies, are British manufactures, also coals, fish, &c.;

to the continent of Europe, and the ports in the Baltic, besides British manufactures, raw and refined sugars, coffee, cotton, rum, and other productions of the western hemisphere. Glasgow imports from the West Indies and America the principal articles of growth or manufacture there; such as coffee, cotton, sugars, rum, mahogany, wheat and flour, staves, pearl and wood ashes, fruits, &c.; and from Spain and Portugal, wines and other productions of these countries; from the Baltic, wood, iron, flax, hemp, pitch, tar, Russia linens, and wheat. To Ireland Glasgow sends manufactures, and in return receives hides, grain, salted beef, butter, and meal, &c. Commerce and Manufactures.

Of all the articles imported, however, the chief are sugar, rum, coffee, and cotton. Of this last article, between forty and fifty thousand bags are imported annually into the Clyde; and, upon the whole, this river is now justly considered as having at least the third trade in the island, admitting London and Liverpool to have the two first.

With regard to the manufactures of Glasgow, we must satisfy ourselves with noticing them very shortly. One general remark, however, may be made, that such is the activity and enterprising spirit of this part of the Scottish nation, that no sooner is an improvement suggested in any art, and demonstrated to be practicable, than it is eagerly pursued here by a variety of ingenious men, and carried into effect in the most vigorous manner. Little information can be obtained concerning the manufactures of Glasgow previous to the revolution, or rather previous to the union. It is certain, however, that before the year 1677 there were four sugar-houses in Glasgow. Previous to that period a soap-work had been carried on by a society of merchants with a considerable capital; but, as usual with very great companies, they were driven out of the market by the superior frugality and industry of pri- Present state of manufactures.

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vate dealers. We have already mentioned the manner in which the manufacture of checks was originally introduced; and indeed after 1725 the linen manufacture, in different forms, was the staple commodity of the west of Scotland. From the cheapness of Irish linens, and the increasing demand for cotton goods, this branch of trade has not of late years been upon the increase; though a considerable quantity of linens, lawns, cambrics, diapers, chccks, &c. are still manufactured. The cotton manufacture, however, together with the various arts dependent upon it, is now become the staple of the west of Scotland, and is here carried on to a greater extent than in any town in Britain, except Manchester. In order to carry this manufacture through all its branches, cotton-mills, bleachfields, and printfields, have been erected, not only on all the streams in the neighbourhood, but even in situations more remote; and such is its prosperous state, that though the number of spinning mills has of late greatly increased, they are still unable to supply the necessary quantity of yarn which the trade requires; so that daily that article, to a considerable amount, is brought from England. Neither is this trade confined to the workmen in the city: the manufacturers of Glasgow employ several thousand weavers who live in the district of the country around it, and even to the distance of thirty or forty miles.

Cotton manufacture.

By a computation which was made in the year 1791, it was thought there were upwards of 15,000 looms employed in this branch; that each loom gave employment to nine persons at an average, in the various stages of the manufacture, including women and children; in all 135,000 persons; and that each loom at an average produced goods to the value of L.100 *per annum*, making in whole the sum of L.1,500,000 Sterling. Since then the increase has been very great; but to what extent it is at present

carried, it is impossible to determine with any degree of precision, for want of sufficient data. This manufacture is not only important of itself, but is productive of work to many thousands of bleachers, tambourers, calico-printers, &c.: many of whom being women and children, whose work was formerly unproductive, renders it of still more general importance. Indeed, among the arts dependent upon this manufacture, that of printing upon cloth may be reckoned one of the chief. It was introduced about the year 1742, by a company of merchants in the city, at the head of whom was Mr Ingram. Their printfield was situated at Pollockshaws. For a considerable time the business was carried on with every disadvantage; the principal parts of the process having been learned at different times, and with difficulty, from the London printers. At length these obstacles to its success were overcome. The original purpose of this work was to furnish printed handkerchiefs, &c. for the English market, through the channel of a class of men whose business was the buying of Scottish goods, and selling them in England; and above all, the supplying of our stores in Virginia, Maryland, and the West Indies. In a short time the different processes of this manufacture became more generally known. Another company was formed; at the head of which was the late Mr William Stirling. They erected a work upon the banks of the Kelvin, at a place called Dalsholm, and began the printing of handkerchiefs with success. The printing of cloth for furniture, &c. was begun about the year 1771. In a few years this company, from the high price of labour at the situation they first had fixed upon, removed their works to the banks of the Leven, where they still continue, and where many others are now also situated. Previous to the year 1769, the printing of the figures upon the cloth had been

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Printed goods.

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done by wooden blocks. At that period copperplates were introduced, first at Pollockshaws, and thereafter at a printfield at Carmile, where the paste was invented and brought to perfection, which puts it in the power of the artist to print with the same plate which prints the red and black pattern on the white ground in the common way; to receive it, and print the flower or pattern white, on the red and black ground, the cylinder press, and several other improvements upon this manufacture, were also invented and carried into practice here. This branch is now carried on to such an extent, that it employs upwards of thirty printfields belonging to the merchants or manufacturers of this city, or with which they are in one way or other connected.

Lord Dundonald's gum.

Among other contrivances, that of Lord Dundonald for producing, from a substance which is found in our own country, a substitute for gum-senegal deserves notice. This gum, or other foreign gums, are requisite for printing fine goods. The settlement of Senegambia belongs to the French, and gives them a monopoly of gum-senegal. During the late war it rose from L.150 to L.400 *per* ton. Lord Dundonald's substitute is said to be prepared at one-sixth of the price of that article even in time of peace. It is produced from the plant called in botany *lichen*, or the moss that grows on trees or hedges planted in an ungenial soil. It is to be obtained in considerable quantities in this country, and in still greater abundance in the severe climates of Sweden, Norway, and the northern parts of America. The first process in preparing gum from the lichen is to free it of the outer skin of the plant and the resinous matter. This is done by scalding the lichen two or three times with boiling water, allowing it to remain so long in the water, as by absorbing it to swell. In doing this the skin cracks, and comes off along with the greatest part of the resinous

matter. Or it may be freed from them by gently boiling the lichen for about fifteen or twenty minutes; then washing it in cold water, laying it afterwards upon a stone or brick floor, where it should lie for ten or twelve hours, or perhaps more. The reason for this is, that the exposure for that time to air greatly facilitates the subsequent extraction of the gum. Commerce and Manufactures.

The scalded lichen is then to be put into a copper boiler with a due proportion of water (say three Scots pints, or two wine gallons) to every pound of lichen, and boiled during four or five hours, adding about half an ounce or three-fourths of an ounce of soda or pearl-ashes for every pound of lichen, or, instead of these salts, about half an English pint of volatile alkali. The boiling should be continued until the liquor acquires a considerable degree of gummy consistence. It is then to be taken out of the boiler, allowed to drain or drip through a wire or hair cloth or searce; the residuum to be put into a haircloth bag or bags, and to be squeezed in a press similar to that which is used by the melters or rinders of tallow. The first boiling does not extract the whole of the gum. The lichen should be boiled a second and even a third time; repeating the process as above described; diminishing at each process the quantity of water and the quantity of alkali, which a little experience will soon point out. When three boilings are employed, the gummy extract of the last boiling should be kept for the first boiling of a fresh batch of lichen. The extract proceeding from the first and second boilings should be mixed together, and evaporated to the consistence necessary for block or press printing. The evaporating vessels should be of tin or thin lead, placed over a range of stoves, and moderately heated by fire or the steam of water. It has been neglected to state, that before evaporating the gummy extract to the consist-

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ence necessary, it should be kept ten or twelve hours, so as to allow the sediment or dregs to subside. The clear liquor may either be drawn off by a syphon, or the dregs may be drawn off by a cock at the bottom of the wooden vessel; the bottom of which should be made sloping, higher at the back than the fore part, in order that the dregs may run more completely off. The proportion of gummy matter remaining in the dregs may be got off by mixing them with a due proportion of boiling water, allowing the liquor to clear, and proceeding as above directed; employing this weak solution for boiling the next batch of lichen. When gum from the lichen is to be employed for making ink, manufacturing and staining paper, and for stiffening silks, crapes, and gauzes, it should be extracted from the lichen without employing any alkaline salts, continuing the digestion, or boiling longer and with a moderate degree of heat; in which case the gummy extract will be nearly colourless. When volatile alkali is used, the boiler must be of iron, because volatile alkali acts upon copper.

Bleaching.

The art of bleaching has here been carried to great perfection; so that goods, particularly cotton goods, which are easier whitened than linen, are prepared for the market in an extremely short time. The process of bleaching by the oxygenated muriate of lime was here first brought to perfection by Mr Tennent; and as his patent was annulled, the public have obtained the unrestrained use of that branch of art. The mode of bleaching cotton, by means of steam loaded with alkaline vapour being thrown into the vessels containing the goods, is also here successfully practised; and, in short, there is no art connected with practical chemistry known in the European world which is not here used in its highest perfection. Our neighbours the French philosophers, who contrive to ap-

beat the chief masters of that branch of science, by means of ingenious speculations or general theories, are in a state of the most gross ignorance relative to the most important facts connected with the minute details of printing and dyeing, and other practical branches of that science, when compared with the artists here. In subserviency to the art of bleaching by the oxygenated muriate of lime, considerable quantities of oil of vitriol are here manufactured. Iron liquor is prepared for printing. The dyeing of turkey red is carried on in several houses, and the colours are accounted equal in beauty and solidity with those from the East. The art was borrowed by the French from the inhabitants of the Levant. It was first introduced here by Mr George M'Intosh, in 1785, by the aid of a dyer from Rouen, Mr Papillon; and the process was soon brought to the highest perfection. The same gentleman manufactures a substitute for sugar of lead, which is used in dyeing and printing. The cudbear manufacture is also carried on in the vicinity by a company, of which the same gentleman is a partner. It is a manufacture of a dye-stuff used for woollen and silk: it is prepared by means of urine from a species of lichen or moss found upon rude rocks. It was first rendered practicable in this country by Dr Cuthbert Gordon, who erected a manufacture of it in Leith, where however it proved unsuccessful. After its establishment at Glasgow, where every commercial undertaking is pushed with greater vigour, considerable improvements were made in it, and it continued to flourish. Glass, soap, candles, ale, and porter, are manufactured to a considerable extent in Glasgow. All mechanical instruments necessary towards carrying into effect the enterprises of merchants and manufacturers are here prepared with the utmost skill. Mills are built

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Cudbear, &c.

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for spinning cotton and flax; cast iron goods of all figures and dimensions are formed with the utmost sharpness of figure. It was here, that is, in the west of Scotland, which we consider as one great commercial district, of which Glasgow is the capital, that the use of the fly-shuttle in weaving was first brought to perfection; an instrument of the utmost importance, on account of the facility with which the art can be acquired—a circumstance that, after the misfortunes attending the commencement of a war, and when the ordinary weavers have found it necessary to go off in thousands, enables manufacturers, upon obtaining new prospects of profit, speedily to resume their operations, by calling into their service men originally educated to other employments. Here likewise was invented the weaving machine, whereby a water-mill, or a steam-engine is enabled to work a multitude of looms; that is, to supply the place and the dexterity of a great number of weavers.

Fly-shuttle.

Printing books.

The important art of printing books has been carried to wonderful perfection in this city, together with the art of type-founding connected with it. It was introduced into Glasgow for the first time in 1638 by George Anderson, who afterwards settled in Edinburgh. In the year 1661 Robert Saunders appears to have undertaken the same employment of a printer, and by him it was carried on till the year 1730. Thereafter Robert Urie began to print in a very neat manner; but the art was afterwards brought to its highest perfection by the printers to the university, Robert and Alexander Foulis, whose editions of the classics are admired through all Europe. In short, there are few arts necessary to the safety, subsistence, or accommodation of mankind, which are not here carried on in a less or greater degree. The consequence of the practice of these numerous arts is, that the vicinity of this city is still

rapidly increasing in population and wealth. The country around it is enriched and adorned, while new streets are annually opened, in which splendid mansions begin to be erected. Population.

POPULATION.

It is difficult to ascertain correctly the population of this city at a remote period. Conjectures upon the subject, from lists of baptisms and funerals, are frequently attempted to be made by political writers; but these are always subject to considerable uncertainty, because when any city or district is prosperous, and its common people well fed and clothed, the births are always fewer in proportion to the existing population than among a poor and miserable people, a great proportion of whose children die in infancy and youth, in consequence of defective subsistence and accommodation. Lists of funerals, when compared with lists of births, with regard to cities, afford also an imperfect principle of calculation, on account of the fluctuation which occurs among their members, as the population of cities is usually in a great degree supported and increased by emigration from the surrounding country. In the year 1609 a register of baptisms was begun in Glasgow, which has since been carried down to the present day. In taking a view of that register for the first seven years, the medium number of children registered is 294; which, multiplied by 26, the number usually allowed as that which comes nearest the truth in ascertaining the population of a place, makes the number of souls in Glasgow 7644. In the year 1712 the number of inhabited houses were 3405; which, at 4½ to a family, makes the number of inhabitants 15,322. In the year 1755, when Dr Webster obtained from the clergy an enumeration of the pa- Progressive population.

Population. rishes, the number then reported to be in Glasgow is stated at 23,546; that is, not including the barony parish. The statement of the county and city, as published by government, in consequence of the returns made in 1801 under the population act, has been given in the Population Table of the county of Lanark.

From that table the whole population of Glasgow and its suburbs, that is, including the whole Barony parish, but excluding the Gorbals, situated on the south side of the Clyde, amounted in 1755 to 27,451; in 1791, to 58,401; and in 1801, to 77,385. Adding the village of Gorbals, amounting to 3896, the whole population of the city, and of all the villages and territory that can be considered as in any degree connected with it, amounted by the returns, as reported under the population act, to 81,281; forming an almost incredible augmentation of nearly 19,000 people in ten years, which supposes this city and its vicinity to be increasing at the rate of almost 2000 persons annually. When it is considered, that during the years 1793 and 1794, upwards of 10,000 men, that is, more than one-half of the people of perfect age, enlisted as soldiers, the influx of population, or the rapidity of propagation in this place, must be truly great, and scarcely inferior to the wonderful accounts transmitted to us of the augmentation of mankind in the United States of America.

More accurate enumeration. Notwithstanding the train of prosperity, and the great extent of population which the returns made to government under the statute alluded to, represented as existing in Glasgow; yet the patriotic citizens were dissatisfied, probably because it represented their town as inferior to the capital of Scotland. They set on foot therefore a new enumeration, the result of which we shall state from Denholm's History of Glasgow. That it may be rightly understood, it is necessary to remark, that by the act esta-

blishing the police, the city and suburbs are divided into the following wards: Population.

1. The north side of Trongate Street from the Cross to Candleriggs Street, the east side of the street from Trongate Street to Bell Street, the south side of the street from Candleriggs Street to High Street, and the west side of that street from the Cross to Bell Street, with all the intermediate streets, lanes, and buildings. Division of the city by the police act.

2. The west side of High Street from Bell Street to Grammar School Wynd, the north side of Bell Street from High Street to Candleriggs Street, the north side of Grammar School Wynd and of Canon Street from High Street to Candleriggs Street, and the east side of that street from Canon Street to Bell Street, with all the intermediate streets.

3. The west side of High Street from Grammar School Wynd to George Street, the north side of Grammar School Wynd and of Canon Street, and of Ingram Street from High Street to John Street, and the east side of that street from George Street to Ingram Street, with the intermediate streets.

4. The west side of High Street from George Street to Rottenrow Street, the north side of George Street and Cochran Street from High Street to John Street, the south side of Rottenrow Street from High Street to John Street, and the east side of that street from Rottenrow Street to George Street, with the intermediate streets.

5. The north side of Trongate Street from Candleriggs Street to Glassford Street, the west side of Candleriggs Street from Trongate Street to Ingram Street, the south side of the street from Candleriggs Street to Glassford Street, and the east side of that street from Ingram Street to Trongate Street, with all the streets, &c.

6. The north side of Argyle Street from Glassford

Population. Street to Queen Street, the west side of Glassford Street, from Argyle Street to Ingram Street, the south side of that street from Glassford Street to Queen Street, and the east side of that street from Ingram Street to Argyle Street, with all the intermediate streets, &c.

7. The north side of Ingram Street from John Street to Queen Street, the west side of John Street from Ingram Street to Rottenrow Street or Lane, the south side of that lane from John Street to the road to Cowcaddens, and the east side of Queen Street and of the said road to Cowcaddens from Ingram Street to the said lane, with all the intermediate streets,

8. The north side of Argyle Street from Queen Street to the boundary of the Royalty in that direction, and the west side of Queen Street and of the road to Cowcaddens from Argyle Street to the bridge on that road over St Enoch's Burn, with all the streets, &c. within the Royalty to the north and west of these lines, and also those parts of the Royalty situated to the west of the road from the aforesaid bridge to Port Dundas on the Canal, and to the west and south-west of the Canal.

9. The north side of Trongate Street from the Cross to King Street, the west side of Saltmarket Street from the Cross to Prince's Street, the north side of that street from Saltmarket Street to King Street, and the east side of that street from Trongate Street to Prince's Street, with all the intermediate lanes.

10. The west side of Saltmarket Street from Prince's Street to the Green Dyke, the south side of Prince's Street from Saltmarket Street to King Street, and the east side of that street and of the Slaughterhouse Lane, from Prince's Street to the Green Dyke, with all the intermediate lanes.

11. The south side of Trongate Street from King Street

to New Wynd, the west side of King Street and Slaughterhouse Lane from Trongate Street to the Green Dyke, and the east side of the New Wynd from Trongate Street to Bridgegate Street, with all the intermediate lanes, &c. and also the south side of Bridgegate Street from Slaughterhouse Lane to the Old Bridge over the river Clyde, and all the lanes and buildings betwixt that part of the Bridgegate Street and the river. Population.

12. The south side of Trongate Street from New Wynd to Old Wynd, the west side of the New Wynd from Trongate Street to Bridgegate Street, the north side of that street from New Wynd to Old Wynd, and the east side of Old Wynd from Trongate Street to Bridgegate Street, with all the intermediate lanes.

13. The north side of Trongate Street from Old Wynd to Stockwell Street, the west side of Old Wynd from Trongate Street to Bridgegate Street, and the east side of Stockwell Street from Trongate to Bridgegate Street, and the north side of that street from Stockwell Street to Old Wynd, with all the intermediate lanes.

14. The north side of Argyle Street from Stockwell Street to Maxwell Street, the west side of Stockwell Street from Argyle Street to Clyde Street, the north side of that street from Stockwell Street to the line of Maxwell Street, and the east side of that street from Argyle Street southwards, and of a line continued in the same direction to Clyde Street, with all the intermediate streets.

15. The south side of Argyle Street and of the Anderston road from Maxwell Street to the boundary of the Royalty, the west of Maxwell Street from Argyle Street southward, and of a line continued in the same direction to Clyde Street, with all the streets, &c. within the Royalty situated to the south and west of these two lines.

16. The east side of Saltmarket Street from the Cross

Population. to St Andrew Street, the north side of that street to the Burn, and the south side of Gallowgate Street from the Cross to the Burn, with all the lanes, &c. situated betwixt these lines and the Burn.

17. All sides of St Andrew Square, with the lanes, &c. betwixt that square and the Green Dyke, the south side of St Andrew Street, and the east side of Saltmarket Street from St Andrew Street to the Green Dyke, with all the intermediate lanes.

18. The south side of Gallowgate Street from the Burn to St Mungo's Lane, both sides of Charlotte Street, and all the other lanes, &c. betwixt the Burn and the grounds belonging to St Andrew Square on the west and St Mungo's Lane on the east.

19. The north side of Gallowgate Street from the Cross to Spoutmouth Lane, the west side of that lane to the foot of the Old Vennel, the east side of High Street from the Cross to the head of Old Vennel, and the south side of that vennel till it join Spoutmouth Lane, with all the intermediate lanes.

20. The east side of Spoutmouth Lane from Gallowgate Street to the College grounds and the north side of Gallowgate Street from that lane to the new road from Gallowgate Street to Drygate Bridge, with all the streets, &c. to the north of that part of Gallowgate Street, and betwixt that street and the College grounds.

21. The north side of Old Vennel, the east side of High Street from that vennel to Duke Street, and the south side of Duke Street from High Street to the Burn, with all the intermediate lanes, &c. within the Royalty, to the east of the Burn, and to the north of the College grounds, including the parts about Drygate Bridge, Lady Well, and both sides of the road towards Cantyre, eastward to the boundary of the Royalty.

22. The north side of Duke Street from High Street to the Burn, the east side of High Street from Duke Street to Drygate Street, and also the east side of Kirk Street to Castle Street, and of Castle Street and of Howgate, and the road to Edinburgh by Kirkintilloch, to the boundary of the Royalty in that direction, and the west side of the Burn from Duke Street northwards, with all the intermediate streets, &c. and whole Royalty situated to the north thereof and to the east of the said road. Population.

23. The west side of Kirk Street from Rottenrow Street northward, and of Castle Street and Howgate, and the road to Edinburgh by Kirkintilloch, to the boundary of the Royalty in that direction; the north side of Rottenrow Street and the lane continued from it westward to the Cowcaddens road, and the east side of that road northward, and of the road to Port Dundas on the Canal, to the boundary of the Royalty in that direction, with all the intermediate lanes, &c. and the whole Royalty to the west of the said Kirkintilloch road and the north-east of the said Canal.

24. The east side of St Mungo's Lane, the south side of the Gallowgate Street from that land to opposite the said road from that street to Drygate Bridge, and both sides of Gallowgate Street; from thence to Camlachie, or the boundary of the Royalty in that direction, including Craignestock and the other streets, &c. adjacent and within the Royalty.

The result of the accurate enumeration which was made of the inhabitants of Glasgow in 1802 will appear from the following Tables:

Population.

Wards.	Families.	Males.	Females.	Total.
1st	239	423	553	976
2d	456	766	956	1722
3d	509	852	1111	1963
4th	416	705	936	1641
5th	344	730	1001	1731
6th	155	332	537	869
7th	427	793	1156	1949
8th	215	503	674	1177
9th	184	377	458	835
10th	552	855	1187	2042
11th	667	1045	1485	2530
12th	481	667	942	1609
13th	760	1189	1555	2744
14th	331	687	954	1641
15th	797	1514	1924	3438
16th	299	512	620	1132
17th	369	655	880	1535
18th	410	698	1012	1710
19th	572	1009	1283	2292
20th	597	1000	1214	2214
21st	1048	1804	2281	4085
22d	602	1066	1318	2384
23d	532	996	1216	2212
24th	818	1735	2090	3825
	11780	20913	27343	48256

	Males.	Females.	Total.	Population.
Brought forward	20913	27343	48256	
Town's Hospital	137	252	389	
Bridewell Asylum	—	2	2	
Infirmary	38	46	84	
Jail	30	8	38	
Bridewell	2	58	60	
Barracks, including women & children	615	196	811	
	21735	27905	49640	
SUBURBS.				
Gorbals	1844	2052	3896	
Trades Town	922	940	1862	
Hutcheson Town	443	447	890	
Muirhouses, &c	441	470	911	
Calton	4732	5322	10054	
Bridge Town	1850	1946	3796	
Camlachie	465	470	935	
Lady Well and Parkhouse	126	117	243	
Anderston	2090	2372	4462	
Cowcaddens	65	61	126	
Remaining inhabitants in the other suburbs and Barony around the Royalty			9815	
Total number of inhabitants in 1802			86630	

From this survey it appears, that Glasgow, containing 86,630 inhabitants, is the second city in the island in point of population. From the report under the population act, Manchester, which is the third, contains 2610 inhabitants less than Glasgow. By the same mode of comparison Edinburgh is only the fourth city. The correctness of this statement, however, must evidently depend entirely upon the comparative accuracy of the different enu-

Population. merations; and it is perhaps improper to compare the result of a minute investigation of the population of one city with a very negligent inquiry in another. As the same defects would naturally attend the investigation made in different places under the population act, it is perhaps the best authority for ascertaining, not perhaps the precise population of any one city, but its relative magnitude when compared with others.

From comparing the bills of mortality of the city of Glasgow with the population, it appears that at an average 178 die every month, or 44½ every week. The number of females exceeds that of males to the extent of 7389, in consequence undoubtedly of the emigration of the men, and their going to recruit the army and navy.

HISTORY.

The history of Glasgow, excepting so far as relates to the recent progress of its commercial prosperity, formerly noticed, contains little that is interesting. Being a provincial town, known only in ancient times as the residence of ecclesiastics, it was the scene of few remarkable events. It does not appear to have been ever fortified; and in the turbulent but superstitious times which preceded the reformation from popery, as the only wealthy inhabitants were in all probability the clergy, they would derive more protection from the reverence paid to their character than from walls and bulwarks. Glasgow being the second ecclesiastical jurisdiction in Scotland, its bishops often acted a conspicuous part in the general history of the country. During the dispute between Bruce and Baliol, and afterwards between Bruce and the English monarchs, we find Wishart Bishop of Glasgow mentioned, in 1291, as one of the four regents of the kingdom of Scotland. The

Bishop Wishart.

remaining three were Fraser Bishop of St Andrews, John Comyn of Badenoch, and James the steward of Scotland. When Edward the First had overrun Scotland, Wishart Bishop of Glasgow joined Wallace in his attempt to restore the independence of the kingdom; but when affairs afterwards took an unfavourable turn, he negociated a treaty with the English, in which he included Wallace and his associates; but they refused to fulfil this treaty. Wishart, along with Sir William Douglas, who had concurred in it, behaved with more honour than is generally to be found in the transactions of those loose times. Finding themselves unable to perform what they had covenanted, they voluntarily surrendered themselves prisoners to the English. Wallace ascribed the conduct of Wishart to traiterous pusillanimity. In the first heat of resentment he flew to the bishop's house, pillaged his effects, and led his family captive. It is remarkable that historians mention the bishop's *sons*, called his *nephews* (*filios etiam episcopi, nepotum nomine nuncupatos.*) It must, however, be remarked, that King Edward ascribed this voluntary surrender to the treachery of Wishart. He asserted, that Wishart repaired to the castle of Rokesburgh under pretence of yielding himself up, but with the concealed purpose of forming a conspiracy in order to betray that castle to the Scots. In proof of this, Edward appealed to two intercepted letters of Wishart. He accordingly confined the bishop long in prison. He was at last, however, received into favour with the king of England, and became one of his advisers relative to Scottish affairs. History

Glasgow is mentioned by the Scottish historians as the scene of one of the exploits of the celebrated Wallace, assisted by his uncle Adam Wallace and Boswell Laird of Auchinleck. A body of 1000 English were in possession of the town. The numbers commanded by Wal- Battle at Glasgow.

History. lace were much inferior; but he succeeded by a stratagem. With the principal part of his troops he himself, in person, attacked the English in front, advancing from the bridge; in the meanwhile Boswell and Adam Wallace, having marched with a party by St Mungo's Lane or Burntbarns towards the south-east quarter of the Drygate Street, near which the English were posted, attacked them unexpectedly in flank, while they were entirely occupied by the engagement into which they had been previously led, and where they imagined the whole force of their enemy had approached, as they saw the battle led on by Wallace in person. As usual in rude times, the surprise produced a total rout; the English fled to the Castle of Bothwell, at the distance of nine miles, and were pursued the whole way. The Scottish historians say that Percy and 700 men fell in this engagement and flight.

The town appears to have been at all times governed by magistrates under the name of *bailies*, but, as formerly noticed, they were appointed by the bishop. Indeed the history of the bishops, a matter now of little importance, may be considered as forming the history of Glasgow. In these times the prebendaries of Glasgow were nearly forty in number; they formed the chapter or council of the bishop, and had the power of electing him; a power that was frequently encroached upon by the popes. Bishop Cameron, of the family of Lochiel, who succeeded to the see in 1426, and held it during twenty years, obliged the whole prebends to build houses in Glasgow, and reside there, leaving their cures in the country (for they appear to have been rectors of parishes) to be served by vicars. The diocese itself extended over the counties of Lanark, Air, Renfrew, and Dunbarton, besides a part of the counties of Roxburgh, Peebles, Selkirk, and Dumfries, including no less than 240 parishes. The residence of the bishop

Prebends of Glasgow.

and his forty prebendaries at Glasgow, together with their whole attendants, could not fail to render it a town of some note in those times. The prebends were the following: The prebend of Hamilton, dean of the chapter; the prebend of Peebles, archdeacon of Glasgow; the prebend of Ancrum, archdeacon of Teviotdale; the prebend of Monkland was sub-dean; the prebend of Cambuslang, chancellor; the prebend of Carnwath, treasurer; the prebend of Kilbride, chanter: the prebends of Glasgow were two; the first was the bishop's vicar, and the second was sub-chanter: the prebend of Campsie was sacarist; the prebend of Balernock was called lord of provan. The remaining prebends were those of Carstairs, Erskine, Cardross, Renfrew, Eaglesham, Kirkmahoe, Calder, Lanark, Moorbattle, Moffat, Govan, Torbolton, Menar, Eddlestone, Durisdeer, Air, Killearn, Douglas, Ashkirk, Alenermubie, Roxburgh, Luss, Stobo, Strathblane, and Polmadie, Cumnock, Sanquhar, Bothwell, and Hawick. History.

Robert Blackadder, who was appointed archbishop in 1484, and died in 1508, was one of those employed to negociate the marriage between James the Fourth and Margaret, eldest daughter to Henry the Seventh of England. It was in consequence of this marriage, that the royal family of Scotland came, upon the death of Queen Elizabeth, to inherit the crown of England. During the time of Archbishop Blackadder Glasgow was made an archbishoprick, A. D. 1488. St Andrew's had been previously raised to that honour in 1471; but it would appear that while these dignified clergy were augmenting their honours or titles, the fabric on which they stood was beginning to be undermined. In the diocese of Glasgow no less than thirty persons were called before the ecclesiastical court for broaching the heretical notions of the reformers, who were then by way of derision denominated Archbishop Blackadder.

History. *Lollards.* Among the number were three Airshire lairds, Adam Reid of Barskimming, George Campbell of Cessnock, and John Campbell of Newmilns. They boldly avowed their opinions, and it was judged prudent at that time to dismiss them with an admonition to repent of the errors into which they had fallen. As the Scottish clergy were not men of greater moderation than their brethren in other Roman Catholic countries, it seems probable, that their conduct on the occasion alluded to resulted from the formidable character of the accused parties.

In 1524, during the minority of James the Fifth, the queen dowager was appointed regent. The Earl of Angus, the head of the family of Douglas, married the queen regent, and placed himself at the head of affairs. The Duke of Albany, the presumptive heir of the crown, having obtained assistance from France, landed in Scotland with a considerable force. Angus assembled the nobility of his party at Glasgow, in 1524, to take measures to resist any change in the state of affairs; but either from disgust against the ambition of Angus, or being intimidated by the force ready to act against them, they declined taking arms, and the Earl of Angus left the kingdom.

Archbishop Dunbar. Speedily thereafter Gavin Dunbar, archbishop of Glasgow, who had superintended the education of James the Fifth, was in 1527 appointed chancellor of the kingdom; and in a few years thereafter he was made one of the lords of the regency, during a journey which the king took to France, to solemnize his marriage with a princess of that country.

During the minority of Queen Mary, the daughter of James the Fifth, the bishop's castle in Glasgow, then possessed by a garrison placed there by the Earl of Lennox, was besieged during ten days by a numerous army under the Regent Arran. It was at last surrendered up-

on capitulation, which was violated, and the whole garrison, excepting two men, were massacred, in 1542. Some time thereafter the Earl of Glencairn, of the party of Lennox, with about 800 men, fought a battle with the regent upon the spot where the barracks now stand; about 300 were killed in all, but Glencairn was beaten. As the citizens of Glasgow were of the party of Lennox, and in some measure his vassals, the regent's army plundered the town of every thing moveable. The very doors of houses and iron bars of windows were carried off. In 1559 the Archbishop Beaton, as formerly mentioned, was under the necessity of deserting his bishoprick, in consequence of the reformation. Previous to that period, efforts had been made here, as well as elsewhere, to stop the progress f the reformation by sanguinary punishments, and, in particular, Jerome Russel, a greyfriar, and John Kennedy, a lad of eighteen years of age from the county of Air, had been burnt on account of the crime of heresy; but as the clergy refused to reform their own lives, such measures only rendered them more odious, and made the change which occurred at the reformation more violent. History.

In the time of popery a variety of ecclesiastical establishments existed in Glasgow, of which scarcely any trace can now be found. In particular, the Dominicans or Blackfriars were brought into Scotland early in the thirteenth century by the bishop of Glasgow. For some time they subsisted merely by the liberality of the clergy and people. In 1270 a convent was founded for them by the bishop's chapter; it stood near the present College Church, and a lane is still denominated the Blackfriars Wynd. Their property was given by the crown to the university, which at present, however, in right of the blackfriars, receives only some feu-duties. The grey- Old ecclesiastical establishments.

History. friars were established here in 1476; their monastery stood at the foot of the lane called Bun's Wynd or Grey-friars Wynd; but it was completely demolished at the reformation in 1560. A variety of chapels were also established here, dedicated to different saints; such as that to St Thanew or Thametes, the mother of St Mungo, St Ninian's chapel, St Rock's chapel, St John the Baptist's chapel, St Mungo's chapel, and the church of St Enoch, where the present church of that name now stands.

State after the reformation. After the reformation, the citizens of Glasgow, deprived of the support which they received from their wealthy ecclesiastical establishment, were driven by necessity, as formerly noticed, to enter upon that commercial career which has raised their city to that distinguished rank which it now holds. They were very zealous reformers; and the severity of manners which the first teachers of the reformation so zealously inculcated took deep root here and in the neighbourhood, and proved of the utmost importance to the temporal prosperity of the people; because the frugality which it produced, going hand in hand with the enterprising spirit to which necessity had given rise, could not fail to be ultimately productive of opulence, as the capital gained, instead of being idly squandered away, was reserved as the basis of more extensive undertakings.

The citizens of Glasgow became zealous enemies of Queen Mary after her fatal marriage with Bothwell, who was universally considered as the murderer of her husband Darnley. When she escaped from the castle of Lochleven, and was joined by her adherents at Hamilton, to the amount of nearly 4000 men, the Regent Murray was at Glasgow. Besides his other troops, he was joined by a considerable number of the citizens of Glasgow, who fought under his standard at the battle of Langside,

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which completely ruined the affairs of that unfortunate princess. In 1570 the bishop's castle sustained an attack from a body of Hamilton's without being taken. During the civil wars in the reign of Charles the First, and during the usurpation, the inhabitants of Glasgow were zealous covenanters. The Marquis of Montrose, after the battle of Kilsyth, marched into the city, and imposed upon it a very heavy contribution. His Highland troops also plundered it severely, but they remained only one night, as they found the plague raging in the city. This visit to Glasgow ruined Montrose by enriching his army. The Highlanders instantly returned home with their booty. After Charles the First was delivered up to the English parliament, the Scottish presbyterians, who were friends of the monarchy and enemies of the independents and republicans, made considerable efforts in favour of the dethroned royal family; but in these they were distracted by divisions among themselves. Glasgow became contumacious, and refused to furnish its quota of troops. The consequence of which was, that its magistrates were removed by order of parliament. The principal bailie, in a letter, observes, that "Before this change some regiments of horse and foot were sent to our town, with orders to quarter on no others but the magistrates, council, session, and their lovers. These orders were executed with rigour. On the most religious people of our town huge burdens did fall; on some ten, on some twenty, on others thirty soldiers did quarter, who, besides meat and drink, wine and good cheer, and whatever they called for, did exact cruelly their daily pay and much more. In ten days they cost a few honest, but mean people, L. 40,000 Scots, besides plundering of those whom necessity forced to flee from their houses. Our loss and danger was not so great by James Graham." During the following year,

Montrose plunders Glasgow.

History. both famine and pestilence wasted the country; oatmeal sold at 1s. 9d. *per* peck, a sum which in those times could only be paid in consequence of extreme scarcity.

Great fire. In 1652 Glasgow was nearly ruined by fire; the houses were at that time covered with thatch, a circumstance which rendered accidental fire extremely dangerous; the houses also were generally built with stone and turf, and the best houses were those which had wooden fronts. In Scotland, at present, a fire, though it may prove ruinous to an individual whose property is not ensured, is never considered as a public calamity. The houses, being in general covered with slate and built of stone, resist the impressions of fire, and a conflagration usually terminates in the house where it commenced. In former times it must have been much more terrible. In the fire of 1652, both sides of the Saltmarket, which then contained the best buildings in the city, were totally consumed, together with the goods and furniture of the inhabitants. It afterwards extended to the Trongate, Gallowgate, and Bridgegate Streets, where it likewise did great damage. After continuing eighteen hours, it was apparently extinguished; but in a few days thereafter it again broke out in the Trongate, and burned violently for four hours. The whole inhabitants were so terrified, that not only those whose houses were destroyed, but the other citizens, carried their furniture to the fields, where they lodged during several nights. Upwards of 1000 families were totally deprived of their houses. Colonels Overtown and Blackmore represented the damage in a letter to Oliver Cromwell as amounting to L.100,000 Sterling. Cromwell set on foot a subscription for the relief of the sufferers.

Sufferings after the restoration. As the citizens of Glasgow were in general covenanters, they suffered much oppression during the unhappy period which intervened between the restoration and the

revolution. Numbers of them were at one period hanged in the streets, and the rest menaced with a like punishment, for attending the sermons of presbyterian preachers. In 1677 the city was a second time almost ruined by fire; 130 shops and houses were consumed, and nearly 1000 families deprived of their habitations. The prison was at the time crowded with persons confined for religious opinions; as the fire threatened to reach it, the citizens forcibly broke open the doors, and set them at liberty. The tyrannical, or rather infatuated government, persisting in its absurd determination to compel the inhabitants of the west of Scotland to renounce presbyterianism, made out a declaration to that purpose, and ordered the inhabitants of these districts to subscribe it. To enforce the measure, an army of 8000 Highlanders arrived in Glasgow in January 1678; during five days they exercised every sort of rapine and cruelty upon those who refused to subscribe the test or declaration prescribed by government; after which the army proceeded westward, marking their progress in every quarter with devastation and bloodshed. The effect of these measures was, the fixing in the minds of the people that complete detestation of the reigning family, and its name and memory, which is not yet effaced. The flight of James the Seventh, and the invasion by William Prince of Orange, were no sooner known, than the city of Glasgow levied and armed 500 men, whom they sent to Edinburgh, under the Earl of Argyle and Lord Newbattle, to support the protestant interest, and guard the convention of estates, which then assembled to make an offer of the crown to William and Mary, the Prince and Princess of Orange.

History.

Great fire.

Hostility of Glasgow to the house of Stuart

In 1715, when an attempt was made to restore the exiled family of Stuart to the British crown, the citizens of Glasgow remembered the oppression which themselves

History. and their fathers had suffered from the bigotry and the principled policy of the last of these princes, and resolved in the most vigorous manner to resist their restoration. They raised a battalion of 600 men, which immediately marched to Stirling, and joined the royal forces under the Duke of Argyle. These two military efforts, at the time when the population of the city was so very moderate, mark in a decisive manner the resolute spirit of the people, and how odious the exiled royal family had become. In 1715, also, the people of Glasgow began to fortify their town by drawing round it a ditch twelve feet wide and six feet in depth; but the completion of the work was rendered unnecessary by the dispersion of the rebels.

Malt tax creates discontents. When the malt tax was extended to Scotland by Queen Anne's Tory ministers, it was regarded in a most unfavourable light by the ordinary classes of people; and nowhere did it meet a more unfavourable reception than at Glasgow. In these times malt liquors formed one of the necessaries of life, and also the most favourite beverage of the lower classes of people. The tax therefore was considered as a measure that must augment the expence of ordinary subsistence, or reduce the body of the people to relinquish what was at once an article of luxury, and a necessary part of their common provisions. When an effort was successfully made to moderate the tax under a Whig administration, in 1726, by reducing it to one-half of its former amount, or 3d. *per bushel*, the representative in parliament for Glasgow, Rutherglen, Renfrew, and Dunbarton, was Daniel Campbell, Esq. of Shawfield. He had voted in the house of commons for the tax, and the populace of Glasgow, to demonstrate their disapprobation of his conduct, assembling in a tumultuous manner, broke the windows, and destroyed the whole furniture of his house. A party of military, un-

der Captain Bushell, attempted to disperse them. Being assailed with a shower of stones, he ordered his party to fire upon the mob, and about twenty fell, killed or wounded. This, instead of intimidating, only enraged the survivors. They were instantly joined by a greater multitude, a number of whom possessed arms. The military finding themselves overpowered, fled towards Dunbarton Castle, and were pursued for several miles by their enraged antagonists. The commander-in-chief, General Wade, next marched to Glasgow with a large body of troops, and took possession of the town. The magistrates were taken into custody, and tried before the court of justiciary at Edinburgh, upon an accusation of having countenanced the violation of the law. They were honourably acquitted; but upon the application of Mr Campbell, an act of parliament was passed, conferring upon him, as a compensation for his loss, the sum of L.6000 Sterling, to be paid out of the funds of the incorporation of Glasgow. The malt tax, and the duties of excise upon beer and ale, which originally were collected in a very lenient manner, were by degrees fully and strictly levied throughout the whole country; the consequence of which has been the depriving of the common people of these less suddenly intoxicating, and consequently less tempting and ruinous liquors; and the introduction, in their stead, of ardent spirits, to the great injury of their morals and private circumstances. Statesmen are apt to consider themselves as no less superior to the rest of mankind in point of wisdom, than they are exalted above ordinary mortals in point of power and station. They usually account themselves personally attacked, or their authority wounded, when they are attempted to be instructed in what is wise and useful by the rude common sense of the vulgar. It is certain, however, that neither morally nor politically

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History. ought the use of malt liquors to have been discouraged by government. By introducing these liquors into general consumption, or retaining them in it, a far more enormous quantity of grain would necessarily be consumed than by the introduction of ardent spirits, of which men can only use a very moderate quantity without instant destruction to health, which will always be avoided by the great mass of the people. An encouragement would thus be held out to agriculture, of the most liberal sort, in consequence of the ample demand for its productions. In times of scarcity the great consumption of grain in malt liquors being suspended, a far more ample fund would be afforded for the subsistence of the people, than that which is produced by the stoppage of distilleries. It might not even be necessary to prohibit entirely the preparation of malt liquors on such occasions; because the poorest and soberest of the people, by an abstinence from one of their luxuries, would effectually and powerfully contribute to their own subsistence. It would also be easily known when a dearth became too severe to be easily endured by persons enjoying only the ordinary wages of labour, from the diminished consumption of malt liquors. The practice of abstaining from them would be voluntarily introduced, and thus a remedy might be found for the greatest of all calamities, by means of private frugality, with little necessity for legislative interference. If, instead of obtaining statutes to be enacted offering bounties for exportation, and absurdly restricting the free importation of grain, the proprietors of land in the kingdom would devise any means for supplying the wants of the treasury without taxes, or with very limited taxes, upon malt liquors, they might assure themselves that they would thus obtain a higher premium, and a more extensive and steady encouragement for the growth of grain, than any which can be

afforded by general restrictions upon the commerce of that necessary commodity. History.

In the rebellion of 1745 Glasgow again suffered considerably. The citizens were known to be most decided and untractable Whigs, obstinate enemies of the house of Stuart, and attached to the succession of the family of Hanover. Such a town, therefore, could expect no indulgence from Prince Charles and his northern adherents. As it was of great importance for the Highland army to seize Edinburgh, they advanced from Stirling towards the east, and did not, in the commencement of the rebellion, visit Glasgow; but the prince sent a mandate to the magistrates requiring them to transmit to him the arrears of their taxes, and all the arms in their possession, together with the sum of L.15,000. As this demand was not complied with, from the hope that the royal forces might arrive to their relief, a party of horse were sent from the rebel army to Glasgow, under the command of John Hay, writer to the signet. The city was threatened with military execution unless the command of the prince were obeyed. The magistrates pleaded inability to raise the money, and at last Mr Hay consented to accept of L.5000 in cash and L.500 in goods. On the return of the rebels from England, they visited the town in full force; they demanded 6000 cloth coats, 6000 pairs of shoes, 6000 pairs of hose, 6000 bonnets, and 12,000 linen shirts. With this demand the city was under the necessity of complying; and thus, excepting with regard to the article of plaids, the inhabitants of Glasgow actually clothed from head to foot the whole Highland army, and over and above, as their numbers were not great, some surplus clothing must have remained for recruits. In the meanwhile the community of Glasgow had undoubtedly merited these exactions at the hands of Prince Charles. They had raised for the Events in 1745 and 1746.

History. service of government two battalions of 450 men each. These battalions were under the command of the Earl of Home at the battle of Falkirk. Prince Charles resided in Glasgow from 25th December 1745 to 3d January 1746. He was received with the most sullen and uninviting silence; when he went abroad, the streets were left solitary. The pious populace of this city remembered with horror the details which they had perused in their favourite historians, or heard from their immediate progenitors, of the persecution on account of religion which had been exercised, and the sufferings which had been endured, under the three last monarchs of the Stuart family, and they regarded their unfortunate descendent as a monster coming with the aid of the barbarians of the north to rivet upon them once more a yoke of political, but more especially of religious intolerance and slavery. The Highland chiefs, who of all mankind were of the most social character, and fond of hospitable and festive pleasures, felt with indignation the dislike with which they were regarded, and the manner in which their society was shunned. They proposed in their resentment, as soon as their contributions were levied, to plunder and burn the town; but the proposal was vigorously, and at last successfully, resisted by the generosity of Cameron of Lochiel, who threatened to withdraw his clan from an enterprise which would thus be for ever covered with odium, and from an army which could not fail to be instantly ruined; because the Highlanders, enriched by the plunder of such a town, would only long to return home, and would have no farther inclination for the hardships of a hazardous warfare.

The expence incurred by the city of Glasgow at the period alluded to, in raising battalions and levying contributions, amounted to L.14,000 Sterling. Application

was made to parliament for relief, and the sum of L.10,000 was voted to them. With this compensation, added to the success of the cause in which they were engaged, they remained well satisfied. History.

From that time the transactions which have occurred at Glasgow are chiefly those enterprises already noticed, or which will hereafter be mentioned under different heads, that are connected with the extension of commerce and manufactures. It may be observed, however, that the city of Glasgow raised a regiment of 1000 men to support the claim of the British parliament to the unconditional obedience of the North American colonies. It has already been remarked, that at the termination of that war, the industry of the city began to be in a particular manner directed towards the cotton manufacture. This happened in consequence of the introduction of Arkwright's machinery for spinning cotton wool, whereby the operation can be performed with a degree of cheapness which speedily introduced cotton fabrics into general use for clothing among people of all ranks. These manufactures in their turn gave assistance to commerce, and have raised the Clyde to its present commercial importance. Liverpool, however, possesses an advantage, by means of its salt trade, for attracting the commerce of America, which it is probable that the manufactures of Glasgow and Paisley do not entirely counterbalance. Regiment raised during the American war.

After the American war spinning mills were established upon the Clyde and other streams, wherever a powerful waterfal could be obtained for giving motion to machinery. As it was necessary to establish these works upon rivers having a rapid descent, and as this circumstance could often only be found in solitary places remote from towns, the singular spectacle was speedily seen, of great buildings erected, and a crowded population col- Effect of spinning mills on morals.

History. denly collected, in sequestered glens by the side of every considerable stream. As the employment of feeding the machinery with wool, and other operations connected therewith, are of extreme simplicity, young children, by the time they attained to seven or eight years of age, were found capable of performing them. Poor persons having large families were induced to send their children to earn a subsistence for themselves at these manufactures, at each of which many hundreds were assembled. Some of the undertakers of these works were men of great piety and benevolence. They considered themselves as the patrons of the poor when they supported their children in the manner now mentioned, and they frequently gave salaries to teachers, by whom the children were instructed at their hours of relaxation from labour. But from what can be learned from the clergy and otherwise, there is much reason to apprehend, that these establishments have not proved favourable to the morals or character of the people. To rear or train up a human being to the possession of a valuable character, it is not enough that he have bread to eat, or even that a teacher shall instruct him to read his own language or to repeat a catechism. It is necessary, that during his earliest years his affections should be cultivated by parental kindness, and that the patriotic and other sentiments which prevail in society should be instilled into his mind. It is likewise of importance to both sexes, that they see set before them an example of frugality, and of proper domestic management, that they may themselves be enabled at a future period to become useful members of families. But by the establishments now alluded to, no opportunity of this sort could be afforded. Before the parental and filial affections had fully operated, they were dissolved by the removal of the parties from each other. The children

knew no other relation in life than that of master and servant; that attachment to their kindred or their country, which is productive of a love of character and of so many virtues, could never arise in their minds; their only society consisted of infants, like themselves, equally ignorant, and equally insulated, and cast out from the world: having their bread provided without any care, either exerted by themselves, or seen to be exerted in their society, they could acquire no foresight; and that mode of life necessarily prevented their obtaining an acquaintance with any kind of domestic management: hence they became totally unfit to manage families of their own. Children thus reared have also been found, for the same reason, more unfit than any others to hold the station of domestic servants, by which a part of the defects of their early education might have been remedied. History.

Of late, in consequence of the facility with which it has been found practicable to adapt the steam-engine to every sort of manufacture or mechanical operation requiring a powerful first mover, mills for spinning cotton begin to be erected, not, as formerly, in remote and sequestered valleys, but in the midst of great cities and populous villages. Hence benevolent and intelligent men perceive with satisfaction, that a part at least of the evils already noticed are likely to be done away. Children employed at them will reside in the houses of their parents during their early infancy; and the ties of domestic affection, which are of the highest importance to the moral welfare of a people, will not be prematurely broken. Still, however, it becomes extremely necessary for the public at large, and for the guardians of public morals and literature, to be very vigilant to prevent, if possible, the poor in this quarter of the country from neglecting the education of their children, and exhibiting to a fu-

History.

ture age the character of the population of Scotland in a degraded state. In a vast variety of operations connected with manufactures, very young children can earn considerable wages by their labour. These wages, in the case of large families, are apt to prove an irresistible temptation to the parents, and to induce them, by premature confinement, to impair their childrens health, and, by withdrawing them from schools, to commit an irreparable injury against their future character and prospects.

Origin and nature of commerce.

Before quitting the consideration of the distinguished manufacturing and commercial district, of which Glasgow is the capital, it may be remarked, that it is to this part of the country that the philosophical speculator in the fashionable science of political economy, as well as in the history of the human mind, ought undoubtedly to resort, to discover the steps in the progress of nations towards riches, the events which retard or accelerate that progress, and the effect of the manufacturing or commercial spirit upon the character of a people. The history of commerce and of commercial cities, when abstracted from local and peculiar circumstances, seems to be this: When the whole territory of a state has been divided among a certain number of individuals, and has been occupied by them as exclusive property, it is clear that no man can exist in the country but by the tolerance of these proprietors, not only because the territory on which he stands is theirs, but because they are the exclusive owners of the fruits of the earth, without which man cannot live. To prevail with the possessors of the soil to give away a portion of its produce, some agree, in a barbarous state of society, to fight their battles, which is the origin of military clientship. When a powerful general government exists, individuals offer to cultivate portions of territory for the owners of the soil, and to deli-

ver a certain proportion of the fruits, retaining the remainder for their own subsistence. This produces a distinction of men into landlords and tenants. As mankind are always apt to augment in population beyond their means of subsistence, there is speedily no more room for additional tenants; but as nobody can live without prevailing with the occupiers of the soil to bestow upon them a portion of its fruits, the surplus people, who are neither owners of lands, nor can obtain possession of farms, must offer their services to the landlords and tenants as labourers or domestic servants, under such conditions as they can obtain. As the passions which lead to the multiplication of our species are apt to be improvidently indulged, the numbers of those men still continue to increase who have no lands, and who at the same time cannot exist unless they can prevail with the occupiers of the soil to bestow a portion of its fruits upon them. In this state an ingenious individual, finding that no one person is willing to pay for his services, goes to the sea-coast, and having manufactured a quantity of salt, he carries it to the interior, where he finds the possessors of the soil disposed very liberally to reward his labour with a portion of the fruits of the earth which they possess. With these he returns to the sea-coast, renews his cargo, and promises his neighbours, that if they will prepare salt in his absence, he will at his return reward their toil with a portion of the corn which he obtains for his salt. This man is a merchant, and his neighbours are manufacturers. In like manner a man who has learned to work in iron will not readily find any one possessor of land willing to support him for his services; but by forging weapons, and shoeing horses for a great number, he obtains, by a contribution from each, a much more liberal supply than he could have derived from an individual. Thus the ma-

History.

History. chanic arts arise, or rather are brought to perfection. Foreign commerce originates in a similar manner. A river abounds with salmon and herrings: these bear no price in its neighbourhood; but an individual collects and salts up a quantity of them. With these he sails to a country where none exist, and exchanges them for the wine of a happier climate; with this he returns, and finds the landholders of his own country willing to give many cattle and much bread for this article of luxury. When enough of herrings and salmon cannot be found, he carries the woollen cloth or the linen garments that his neighbours wives had prepared, to the country where wine and oil grow, or perhaps where iron and salt are made; and returning with these commodities, he obtains food for himself and all his neighbours. Thus artists and traders, finding their own mutual importance to each other, cluster together, and villages and cities are formed. They are inhabited by men who have no land, and who must endeavour by their ingenuity and labour to perform some service, or to procure some object of art, in exchange for which the possessors of the soil may be induced to bestow upon them a portion of its fruits.

As men in this situation are at all times sensible of the uncertain tenure by which they enjoy the means of subsistence, and of the advantage possessed by the owners of the soil in times of famine, or of old age and inability to labour, they are naturally rendered of an anxious and laborious character. They become eager to hoard up as much as possible of the profits of their industry to support their families if left in infancy, or themselves under old age or sickness, or in times of general scarcity. Hence frugality, and a disposition to hoard up and accumulate whatever is accounted most valuable by mankind, becomes a part of the character of a commer-

tial community. On the other hand, the proprietors and occupiers of the soil are naturally of a very different temper: they possess a portion of the solid globe, which cannot fail from beneath their feet, and they trust that the sun will shine, the rain will descend, and the earth give forth its fruits, in time to come as it has done in time past. Placed thus in a state of security, they have no occasion for hoarding up wealth, as the returning year will necessarily bring a returning supply to their wants. Hence possessors and occupiers of land, in the earliest stages of society at least, seldom accumulate more wealth than was left them by their fathers: they are led, by the security of their situation, to live liberally and negligently; they often squander what has been previously gathered; and they think themselves abundantly prudent, if they leave their possessions in the same state in which they were handed down by their forefathers. History.

The artists and traders in towns can only attain to an independence resembling that enjoyed by the owners of land, by accumulating either vast quantities of the least perishable commodities, whether they consist of articles of food and raiment, or of any commodities, such as the metals, upon which mankind have generally agreed to set a high value. Thus it happens, that a community can only accumulate great wealth by having a numerous and enterprising class of inhabitants who have no lands of their own, and who, on account of their dependent and precarious situation, are induced to exert their industry in heaping up riches, or those commodities which enable them at any time to procure for themselves and their children the food which the land produces. The manufacturers and merchants of a country, therefore, are the persons who render it great, and wealthy, and powerful. Without them there would be no accumulation of instru-

History. ments of labour, no powerful navies to plough the ocean, no skilful and costly apparatus of war to render the wealthy superior to barbarous nations. The steam-engines, the canals, the harbours, warehouses, splendid cities, and the whole apparatus of commerce, convenience, magnificence, or luxury, are their work. From their love of the independence and security which the possession of land produces, many of them are always willing to exchange their accumulated treasures for an adequate portion of the soil of their native country. When they do so, carrying along with them their active and considerate character, they improve and adorn with enclosures, plantations, the introduction of the best agricultural instruments and kinds of cattle, and every other form of amelioration, the spot which has fallen to their lot. Such men also, while residing in towns, encourage agriculture in another way, which is of still more importance. By the high price which they give for the fruits of the earth, they stimulate the industry of the farmer; and by the example of their industry and activity they induce him to endeavour, by the improvement of his lands, to accumulate treasures, wherewith he in his turn may become independent, and perhaps a proprietor of lands.

In the first part of the commercial career of a people, frugality or parsimony forms the most distinguishing feature of their character. They are always mindful of the precarious tenure by which they hold their very existence; that is, by which they can hope to obtain bread to eat. Being anxious about futurity, they are eager in every transaction to obtain the highest possible advantage, and to save or accumulate with the utmost care what they have earned. Their virtue is frugality; it is absolutely necessary in the situation in which they are placed, and is the source of the future aggrandisement of

their country. But in early times this eagerness for small profits, and anxiety about small accumulations, never fails, in the eyes of the more independent possessors of the soil, to assume the appearance of sordidness and of avarice. And hence, in every country, the first traders and mechanics are regarded with contempt by the proprietors of land; and their occupation, that is, their industry, is accounted slavish and degrading when compared with the trifling degree of exertion then employed upon agriculture or pasturage, and with the manly exercises of hunting and of war. In proportion, however, as the commercial part of a community are successful in their pursuits, that is, in proportion as they accumulate treasures, bring to perfection the various mechanical arts, and become acquainted with the resources opened by an enlarged commerce, they lose the extreme timidity and parsimony which marked the first stage of their career. Their pursuits and temper of mind assume a form, not of avarice, but of ambition. Superior to the fear of absolute want, they seek after riches, not merely for the sake of obtaining a secure subsistence, but as a source of distinction in society, and as the means of attaining to all the enjoyments of polished life, and all that consideration and influence among mankind, which never fail to attend upon eminence in wealth or station. In this state of things the conduct of traders, no longer under the controul of want or of avarice, becomes animated by a powerful sentiment of ambition; and their undertakings resemble, in the comprehensive intelligence with which they are formed, and the intrepidity with which they are executed, the enterprises of those ambitious men who aspire, in the senate or the field, to attain to boundless distinction or aggrandisement. In every respect, the characters of men aspiring to power and eminence by an enlarged commerce,

History.

History. and by eloquence or by war, assume such a degree of resemblance, as sufficiently demonstrates that the efforts of both proceed from the same principles in our nature. The extensive merchant is distinguished by the character of liberality, honourableness, and candour in his transactions. Bills, that is, claims upon him for debts to the amount of a princely fortune, coming from a distant country, may be safely transmitted to himself in a letter by the ordinary post, without the hazard of his detaining them for an hour, or hesitating to bind himself on a fixed day to pay the full amount, under the penalty of utter ruin to all his prospects. In his mode of living and ordinary expences, he is liberal, ostentatious, and luxurious; he interests himself in all the general affairs of the community, and is ready to give countenance and aid to every improvement in science or art. In every respect, the enterprising and fearless nature of his mode of life forms a striking contrast to the caution of men possessed of moderate landed estates, by whose ancestors his predecessors were despised, but who now find themselves left far behind in the command of riches, and even perhaps in the liberal enjoyment of the gifts of fortune.

To this liberal and enterprising character, the manufacturers and merchants of the west of Scotland have long since attained. Riches are here pursued with ardour by every means that the most ingenious artists or commercial speculators can devise; and at the same time, among eminent manufacturers and merchants, every luxury of polished life is enjoyed with a degree of freedom which naturally results from that confidence in his own fortune that naturally attends a man of a bold character, who finds himself engaged in a career that he accounts prosperous. The families of country gentlemen, embarrassed by the costly equipages which, in consequence of their rank in

society, they account themselves bound to maintain, and often also encumbered by the debts of a predecessor, are apt to regard with some degree of envy the style of expence which an eminent merchant or manufacturer displays at his table, in the dress of his family, or the neatness of his town and country residence. When a commercial derangement occurs in consequence of general overtrading, or of some public event, they ascribe his embarrassment to his prodigality or profusion, and accuse him of injustice to his creditors. His brethren in trade, however, who are the only sufferers by his misfortune, judge very differently. They know, that amidst the extensive undertakings of a great merchant, the liberal support of his family could be a matter of little importance, and could seldom or never embarrass his affairs; and they consider, certainly with some truth, that a man of an enlarged capacity and enterprising character, who is giving bread to thousands, who is conducting vast transactions, and who has no reason to doubt the ultimate success of his efforts, is entitled in the mean time to a liberal establishment, and ought not to be withdrawn from concerns on which his country relies for its prosperity to count farthings in his kitchen. History.

We have here taken particular notice of the natural effects of that enterprising character which commercial men have now happily assumed; because at every unfortunate turn which commerce for a short time takes, it is still not unusual to hear among other classes of society the most illiberal and unjust reflections made against what is called the extravagance and luxury and presumption of persons engaged in trade. These remarks are uniformly the result of ignorance or of peevish jealousy, and are only made because a very extensive and successful commerce is still somewhat new in Scotland, and we are not

History. yet sufficiently aware, either of the hazards to which it is exposed, or of the effects which it ought to produce upon the human character. Its extent is now indeed very great. A Glasgow merchant, being in the company of a number of landed gentlemen, who talked of the rental of their several estates, and of the enormous sum which they would bring if sold, in consequence of the high price to which land has now risen, said to them dryly, "Gentlemen, were all your estates sold to-morrow, the price of them would not pay my debts." Such a state of things necessarily brings a corresponding state of manners along with it. Accordingly it is in the west of Scotland that every useful art meets with the readiest encouragement; and every improvement, from the formation of iron to the combustion of inflammable air as the means of illumination, has been most readily brought to perfection. We may add, that as the mercantile character predominates, the country gentlemen in this district are uncommonly ready to encourage every improvement, and many of them have at times caught the infectious rage for mercantile speculation.

DUNBARTONSHIRE.

Proceeding northward or to the north-west from Glasgow, we enter the county of Dunbarton, anciently denominated the *Shire of Lennox*. This county is of a very irregular form. It is situated in the fifty-sixth degree of latitude and fourth degree of west longitude. It is bounded by the river Clyde and Argyleshire on the west, by Perthshire on the north, by the counties of Stirling and Lanark on the north-east, and Renfrewshire on the south. It contains twelve parishes; *viz.* Dunbarton, Cardross, Row, Roseneath, Arroquhar, Luss, Bonhill, Kilmarnock, West Kilpatrick, East Kilpatrick, Kirkintulloch, and Cumbernauld. The two last are slightly separated from the rest of the county by a corner of Lanarkshire. They anciently belonged to Stirlingshire; but in consequence of an application of the Earl of Wigton, their proprietor, they were annexed to the county of Dunbarton, of which the earl was then the hereditary sheriff. This circumstance of the junction of these parishes to Dunbartonshire has given the county a very irregular form; as, in consequence of their junction, it is made to approach to the vicinity of Falkirk, not far from the Frith of Forth on the the east, while towards the north-west it enters the country of the lofty Grampians. Its figure is like that of a clumsy club with the handle extending eastward, or like a boot with a very small leg, whose toe is pointed to the north. Boundaries.

The county contains 309 square miles, and consists of a mixture of natural pasture, wood, and arable lands. The first, including moors, peat mosses, and other places inac-

Mountains. cessible by the plough, contains 46,739 square Scottish acres, the only measure used here; the second, which is mostly not arable, 9883; and the third, 68,594. Total 125,216 Scottish, or nearly 159,356 English acres.

Kilpatrick hills. The Kilpatrick hills originate near Dunbarton, and, so far as this county is concerned, terminate at Lochlomond on the north-west, and Kilpatrick on the south or south-east. They form part of a remarkable ridge, that, beginning near Dunbarton on the west, extend eastward to the vicinity of Stirling. After an interruption there, to give a passage to the Forth, they proceed, under the name of the *Ochils*, towards the Frith of Tay, where, after another interruption, to give passage to the Tay, they again proceed north-eastward from Perth, under the name of the *Sidlaw hills*. The Clyde at Dunbarton passes their western extremity, or rather perhaps finds a passage across their tract; for beyond the Clyde the same range of hills seems to be continued westward by Greenock. Of these hills, in Dunbartonshire, the upper stratum is whin-stone incumbent on alternate layers of lime-stone and schistus to an immense depth. These hills, with little exception, are inaccessible to the plough; they abound with moors, peat mosses, and woods. In the north-western part of the county, the mountains of Arroquhar and Luss may be Grampians. considered as the southern continuation of the Grampians, from which they are divided by Lochlomond on the east. Their precipitous and rugged summits, many of which are 3000 feet above the level of the sea, are for several months in the year perpetually covered with snow, and often hid among the clouds. Heavy rains have deprived many parts of them of soil; but in general they have enough for the luxuriant growth of some of the best pasture grasses for sheep, and they are ornamented with some of the rarest mountain or Alpine plants in Europe.

This county is too long and narrow to admit of its having

many streams that rise and terminate within itself. A great part of its western boundary is formed by what is called *Lochlong*. It is to be observed, that in the language of the northern and north-western parts of Scotland, not only are inland lakes denominated *lochs*, but the same appellation is bestowed upon any other waters that advance far into the country. Lochlong is a long and narrow bay or arm of the sea, that advances northward from the Frith of Clyde. It is extremely deep, and stretches into the country twelve miles to within a mile and a half of the fresh water lake called *Lochlomond*. The neck of land between Lochlong and Lochlomond is called *Tarbat*; a word which in the Gaelic signifies the *drawing up of ships*. It is said to have received the name from an adventure of the Danes, who, in one of their attacks on the west of Scotland, are alleged to have sailed up Lochlong, and drawn their vessels across the isthmus into Lochlomond for the purpose of plundering the islands, into which a great part of the wealth of the country had been carried for safety. We entertain some doubt, however, of the correctness of the tradition, as we apprehend that the Danes would rather have chosen to sail up the river Leven into Lochlomond, even although the navigation be so difficult as to require horses to be used at present to drag vessels against the stream. It is easier to drag a vessel against the ordinary current of a river than over dried ground. The neck of land called *Tarbat* is perhaps to be considered as analogous to what are now called *carrying places* in America, where goods must be disembarked and carried over land to the next lake or river.

Waters. Lochlong.

Eastward from Lochlong another bay advances from the Frith of Clyde in a direction parallel to Lochlong. It is called the *Gairloch*, and is seven miles in length and two in breadth. It and Lochlong peninsulate the parish of

Gairloch.

Waters. Roseneath, which is a continued ridge, dividing these two arms of the sea. Eastward from Lochgair and Lochlong is the celebrated Lochlomond, the finest and the most beautiful of all the Scottish lakes. Whether for extent or variety and magnificence of scenery, it is probably not to be equalled by any lake in Britain. Its beauties have been the subject of so much description, that a very minute account of them here seems unnecessary. Five miles to the north-west of Dunbarton the traveller from the south obtains the first view of Lochlomond, grouped with islands, and encircled with lofty mountains. The circumstances which render Lochlomond more interesting than other great pieces of water, seem to be the woods in its vicinity, which flourish readily in this climate; the variety of its romantic islands crowned with trees; and the vicinity of the terrific Grampians, affording a striking contrast to the rich and placid scenery which is exhibited in their immediate vicinity. At the house of Cameron, situated at the southern extremity of the lake, the whole beauties of this delightful expanse of water are in full view. After passing the house of Cameron, the road skirts the western banks of the lake; sometimes losing itself amongst the natural woods that clothe the brow of the mountains; at other times emerging into a more free space; thereby presenting in succession a variety of scenes and views of the lake, islands, and adjacent seats, highly captivating and delightful. Thus the road continues to Luss, a small village, charmingly situated.

Lochlomond.

Rosedoe. In this neighbourhood Sir James Colquhoun's house of Rosedoe is delightfully placed on a rich peninsula projecting into the lake so as to appear insulated. The ground is finely wooded; and a tower of the ancient castle or habitation of the family forms an excellent contrast to the modern mansion. Some very bold and rugged moun-

tains compose the back-ground of the scene. From Luss the road still verges along the side of the lake, which now diminishes in breadth very rapidly, while the adjacent hills are higher, more picturesque and magnificent, than those farther to the south. Passing the water of Uglas, which discharges itself into the lake, and continuing the route along the banks for several miles, the highway suddenly ascends to the top of a lofty promontory, projecting very considerably into the lake, called the *Point of Firkin*. Although the ascent is difficult, abrupt, and tedious, yet the view from the summit, to every admirer of nature, amply repays the labour attending it. From this eminence, the whole expanse of the lake, diversified with its numerous islands, is displayed to the eye. The shores in some places appear abrupt and precipitous; in other situations they are covered with copsewood, interspersed with fields of corn and the houses of the inhabitants. Waterna.

Nearly opposite, but in the county of Stirling, is the towering Benlomond, one of the most lofty of all the Grampians. It is no less than 3262 feet in height above high-water mark; and the western part of its basis, which is washed by the limpid water of Lochlomond, is no more than 17 feet above the level of the sea. Its form is conical, and without any concurring object might be thought sufficiently picturesque and interesting. Aided, however, by the lake and the surrounding scenery, it renders the view from the Point of Firkin uncommonly magnificent as well as beautiful. Benlomond.

Lochlomond is about eight miles broad towards its southern part; and from north to south it is about twenty-six miles in length. In proportion as it shoots towards the north it gradually contracts. Opposite to Tarbat, the breadth of the lake scarcely exceeds a mile from the Inn there to the base of Benlomond; and here the lake is Extent of Lochlomond.

Waters. usually crossed by the enterprising traveller who has the spirit to ascend this lofty mountain. An English gentleman, some years ago, wrote the following verses upon the window of the Inn; they contain very useful directions for the instruction of those whom an enthusiasm for the beautiful and sublime of nature may lead to ascend this celebrated mountain.

Stranger! if o'er this pane of glass perchance
Thy roving eye should cast a casual glance,
If taste for grandeur and the dread sublime
Prompt thee Benlomond's fearful height to climb,
Here gaze attentive, nor with scorn refuse
The friendly rhymings of a tavern muse:
For thee that muse this rude inscription plann'd,
Prompted for thee her humble poet's hand:
Heed thee the poet; he thy steps shall lead
Safe o'er yon tow'ring hill's aspiring head.
Attentive, then, to this informing lay,
Read how he dictates as he points the way.
Trust not at first a quick advent'rous pace,
Six miles its top point gradual from the base;
Up the high rise with panting haste I pass'd,
And gain'd the long laborious steep at last.
More prudent you, when once you pass the deep,
With measur'd pace ascend the lengthen'd steep;
Oft stay thy steps, oft taste the cordial drop,
And rest, oh rest! long, long, upon the top.
There hail the breezes; nor with toilsome haste
Down the rough slope thy precious vigour waste:
So shall thy wondering sight at once survey
Vales, lakes, woods, mountains, islands, rocks, and sea;
Huge hills that heap'd in crowded order stand,
Stretch'd o'er the northern and the eastern land,
Vast lumpy groups; while Ben, who [illegible] en shrouds
His lofty summit in a veil of clouds,
High o'er [illegible] rest displays supe[illegible] state,
In proud pre-eminence sublimely great.
One side, all awful to the gazing eye,
Presents a steep three hundred fathoms high.

The scene tremendous shocks the startl'd sense
With all the pomp of dread magnificence.
All these, and more, shalt thou transported see,
And own a faithful monitor in me. Wyers.

The northern part of Lochlomond is considerably deeper than the broader part of it towards the south. The depth at the foot of Benlomond is about 120 fathoms; the depth of the southern part is about 20 fathoms; and in many places it is not above 14 fathoms. The northern and deeper part of it is never covered with ice; but south from Luss, in severe frosts, it has been so completely frozen over as to render it safe for men, and even for loaded horses, to pass to the different islands. After great floods in winter the surface of Lochlomond has been known to rise nearly six feet above its lowest summer's height. It is thought that the lake is rising in height. Across the channel of the stream called *Falloch*, at the north end of the lake, there are stones fixed at regular distances, once evidently intended for enabling passengers to step from one side to the other, but now never covered with less than four or five feet depth of water. Near the middle of the bay of Camstraddan, when the water is low, there is a heap of stones to be seen, where the Colquhouns of Camstraddan are once said to have had their family residence. Cambden, in his *Atlas Britannica*, describes an island as existing there in his day, in which there was *a house and an orchard*. About five miles farther south, at a distance from the shore, there is another heap of stones said to be the ruins of a church. A field opposite to it is still called *Ach-na-beaglais*, or the *Church-field*. This rise of the surface of the lake is probably owing to the sand and mud subsiding near the mouth of the Leven and damming up the water.

In this lake they reckon about thirty islands, small and

Waters. Islands of Lochlomond.

great. Most of them are finely wooded, but only about ten of them are of considerable size. The principal islands are the property of the Duke of Montrose, or of Sir James Colquhoun of Luss. Of those which belong to Luss the following are the chief: 1st, *Inbctavanach*, above three quarters of an English mile long, and about two furlongs and a half broad, contains 135 Scottish acres; of which 127 are under a good oak-wood, which is moderately valued at L.1000 each cutting, once in twenty years. The remaining acres are out-field, and carry at times a good crop. The island is not at present inhabited. A monk is said, at a remote period, to have fixed his residence there, from whom it derives its name of *Inch-tavanach*, i. e. *the island of the monk's house*. A sweeter retirement, or more adapted for contemplation, he could not perhaps have chosen. 2dly, *Inchconagan*, situated on the east side of Inchtavanach, and separated from it by a narrow sound, half a mile long and about two furlongs and a half broad, contains ninety-four acres, which are all under a natural oak and fir-wood. It is worthy of notice, that the narrow sound or channel between the islands of Inchtavanach and Inchconagan, the average depth of which does not exceed two fathoms and a half, and where there is no perceptible current, was never known to freeze even in the severest winters. 3dly, *Inchmoan*, i. e. the *Moss Isle*, lying a little to the south of Inchconagan, about three quarters of a mile long and a quarter broad, contains ninety-nine acres, mostly of moss, from which the village of Luss and the neighbourhood are supplied with peats. 4thly, *Inchlonaig*, near a mile long, and above a quarter of a mile broad, contains 145 acres, 66 acres of which are under a natural wood of old yews. The whole island has for many years been kept as a deer park by the family of Luss.

Of the islands belonging to the Duke of Montrose, four are of considerable extent. *Inchcailloch*, which signifies the Island of Old Women, so called because there was formerly a nunnery there, was at one time the site of the church of the parish, now called Buchannan, in Stirlingshire. *Inchfeiel*, which signifies the Long Island, and *Incherevin*, the Round Island, have a tenant in each, with arable and pasture ground; but the most valuable of all the islands is that called *Inchmurin*, in which the Duke of Montrose has a deer park and a forester. Islands.

Lochlomond has been long celebrated for three wonders, *fish without fins, waves without wind, and a floating island*. The fish without fins are supposed to be vipers, which abound in the islands, and have been seen swimming from one island to another. With regard to the waves or swell without wind, it occurs in all extensive and deep waters when a calm immediately succeeds a storm. It is also said, that during the great earthquake at Lisbon in 1755, Lochlomond was uncommonly agitated, and the water suddenly rose several feet. A small island near the west shore of Inchconagan is called the Floating Island, but it is now fixed there; and if it once actually floated, it must be considered as a mossy fragment bound together by the matted roots of coarse grasses, willows, Dutch myrtles, &c. Curiosities.

The principal rivers connected with this county are the Clyde, Leven, Enrick, and Kelvin. None of these have the principal part of their course within this county, excepting the Leven. This is the outlet by which Lochlomond discharges itself into the Clyde. It is about seven miles in length, and the water is exceedingly pure. This is the general character also of the water of Lochlomond. All the feeders of the loch, except Enrick, are mostly springs that run over naked rocks or uncultivated ground, Rivers.

Waters. from which hardly a particle of earth is carried away even by the heaviest rains. Leven is navigable for large boats up to the loch; but owing to the rapidity of the water in some places, they cannot be brought up without the assistance of horses.

Enrick. In this county the river Enrick, which is the principal stream that falls into Lochlomond, winds through a plain of more than 3000 acres. Near the house of Buchannan, on the extremity of Stirlingshire, its banks are adorned with extensive lawns and forests, and consist of a rich deep soil. The soil, however, throughout the country is extremely various. A stiff clay soil, which in the recently turned up furrow glistens as if besmeared with oil, comprehends at least one-half of the land under tillage. Near the sea-coast the land is light and gravelly, and mossy upon the high grounds. In the neighbourhood of some whin rocks it is stony, but not unfertile. The climate, from its vicinity to the Atlantic Ocean, and from the many high mountains with which the country abounds, is extremely wet and variable. Strong winds and heavy rains come chiefly from the south-west. In consequence of this the trees bend towards the north-east. With respect to heat and cold, there are all the varieties that usually take place from the lofty summits of the mountains down to the sea-shores and deep glens, which are mostly on a level with the sea.

Salmon, how kippered. In all the rivers of this county salmon are caught in less or greater abundance. The salmon fisheries of Lochlomond and the Leven are of considerable value. In several parts of the county salmon are cured in a peculiar manner, called *kippering*; and with many persons throughout Scotland kippered salmon is a favourite dish. It is practised here in the following manner. All the blood is taken from the fish immediately after it is killed; this is

done by cutting the gills: it is then cut up the back on each side the bone or chine, as it is commonly called. The bone is taken out; but the tail, with two or three inches of the bone, is left; the head is cut off; all the entrails are taken out, but the skin of the belly is left uncut; the fish is then laid with the skin undermost on a board, and is well rubbed and covered over with a mixture of equal quantities of common salt and Jamaica pepper: Some of this mixture is carefully spread under the fins to prevent them from corrupting, which they are exceedingly ready to do, especially if the weather is warm. A board with a large stone is sometimes laid upon the fish, with a view to make the salt penetrate into it more effectually. In some places, as Dunbarton, instead of a flat board, a shallow wooden trough is used, by which means the brine is kept about the fish; sometimes two or three salmon are kippered in the same vessel at the same time, one being laid upon the other. The fish, with the board or trough, is set in a cool place for two or three days; it is then removed from the board, and again rubbed with salt and pepper; after which it is hung up by the tail, and exposed to the rays of the sun or the heat of the fire. Care is previously taken to stretch out the fish by means of small sticks or hoops placed across it from side to side. After it has remained in the heat a few days, it is hung up in the kitchen or other dry place till used. Some people, in order to give the kipper a peculiar taste, highly relished by not a few, carefully smoke it with *peat reek* or the reek of juniper bushes. This is commonly done by hanging it up so near a chimney, in which peats or juniper bushes are burnt, as that it receives the smoke; there it remains two or three weeks, by which time it generally acquires the taste wanted. Waters.

Farms over the whole, and properties in some parts of

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this county, are very small; many of them containing about thirty acres, and some no more than ten or twelve. On each of them a farmer with his family resides. This extreme smallness of the farms was occasioned by feuars, who rather than put their children to any other employment than that of a husbandman, subdivided their lands among them. They thought it a disgrace that their children should be any thing but *lairds*. Than this practice, when carried to too great length, few things are more hurtful to the individuals concerned in it, or a greater obstacle to the prosperity of a country. The subdivisions are now become so small, that some proprietors cannot afford to keep a horse; consequently their labour in the field must be greatly retarded, even though some of them may keep a small horse: yet in order to have their land ploughed, they are under the necessity of joining with two or three of their neighbours; a circumstance which is frequently inconvenient for some of the parties, is often productive of serious quarrels, and always unprofitable.

Many small farmers.

In these farms by far too much of the land is cropped; but cropped it must be, to procure meal for the family, and fodder for a cow or two, with which the farm is overstocked. Nothing is laid out in improvements, and the land is scourged to the last extremity. The whole produce can hardly support the family that depends upon it for subsistence, even with the addition of what is procured by the unremitting labour of the wife and children in spinning yarn, either for sale or making webs; part of which clothes the family, and the rest is sold. Whilst things remain in this situation, no agricultural improvements can in these districts be rationally expected. In general, arable farms of all sorts are in this county too small for an improved state of agriculture. Their smallness arises partly from the humanity of pro-

prietors, who are unwilling to dispossess the ancient tenants of the soil, and partly from the want of capital of the persons engaged in agriculture, which disqualifies them from entering upon extensive undertakings. What are called pendicles, containing from two to ten acres, are not unfrequent; they are usually occupied by labourers and tradesmen. These small spots are often the best improved lands in the country. They receive a large proportion of manure, and a great part of them is usually under potatoes or clover. Some disputes have existed about the utility or advantage which the country derives from small possessions being thus granted in lease to persons who are not farmers by profession. It has been said, that every man does most business, or exerts himself most successfully, when he adheres to a single employment; and that no labourer ever exerts himself vigorously upon another man's land, if he have land of his own. He becomes too much attached to his own possession, loiters away his time about it, and is thus ultimately rendered a poorer man than if he had confined himself to the employment of a labourer or servant to another. With regard, however, to tradesmen residing in the country or in remote villages, the case is often different. They are useful and necessary in these districts, at the same time that they have not always full employment; and it is beneficial to themselves, and consequently to the public, that the leisure or superfluous time which their regular employment leaves, should be beneficially filled up by agriculture. A portion of this last employment is so grateful to the inclinations of men, and so conducive to bodily health and vigour, that it ought not to be denied to individuals when it can be rendered consistent with general utility. Blacksmiths, wrights, and other tradesmen, though much wanted in the country, have seldom complete em-

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Small possessions held by tradesmen, &c.

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ployment without such a resource; and it affords a healthful occupation to their children at certain seasons of the year. Even with regard to weavers and others employed in the service of great manufacturers, their health, and perhaps also the integrity of their character, is best preserved, while it is found practicable to allow them to reside in scattered villages, and to interfere at times in the occupations of a country life.

Rise of rents.

In this district, as everywhere else in Scotland, a great rise has taken place in the rent of land. About fifty years ago a sheep-farm called *Inverglass*, in the parish of Arroquhar, was rented at L. 8 *per annum*, and the tenant became bankrupt before his lease was out. At present the same farm is let for L. 80 *per annum*, and the tenant prospers. Three causes have occurred to produce this important change: 1*st*, An improvement in the mode of managing the land; it was formerly pastured by a few black cattle in summer and a few goats in winter, whereas it is now occupied by sheep. 2*dly*, In consequence of the increased population and riches of Glasgow and its neighbourhood, the demand for butchers meat is much greater, and higher prices for it are given. *Lastly*, The value of money in the island of Great Britain is very different from what it was fifty years ago. It is probably sunk in value in the proportion of at least three to one. Thus the failure of the ancient tenant of the lands alluded to can be accounted for.

Farm houses.

The lately built farm houses and offices on several estates here are pretty good, and generally well situated. They are mostly constructed in the form of a court, having the dwelling house on the front, the offices on the sides, and the dunghil commonly in the middle of the area. The house is generally one story high, and consists of a large kitchen and room, or *spence* as it is usually called.

Sometimes the garrets are fitted up for sleeping places. The whole *steading*, the name given to the house and offices, costs about L.160 Sterling. By far the greatest number of steadings in the county are extremely small and ill constructed; but little else can be expected on diminutive farms, the average size of which, when meant to be in tillage, is about fifty acres, and where few are as large as a hundred. These, partly in tillage, and partly in pasture, are only from one to two hundred acres. Hence the old houses upon these small farms are of a very miserable sort. The dunghil is seldom as far as two yards from the door, and the dwelling house and offices are in one row, or may be said to be under the same roof, as one entry commonly serves both for the dwellinghouse and the cowhouse. This, however, alludes chiefly to the high western part of the county. Thatch is the common covering both for houses and offices; but some lately erected are covered with slate and tile. The steadings in some parts of the county are thatched with heath (*erica vulgaris*) or breckins fern (*pteris aquilina.*) Either of these materials, when properly managed, is very durable. The heath is cut before harvest, and is laid on the house with the stems downwards. Breckins, when used for thatch, are pulled with the root in the beginning of October; about which time they have arrived at their greatest degree of solidity: care must be taken that they are not brittle. They are generally used with the leaves when dry, but not withered; for if they are withered, they do not adhere closely together, and are apt to fall off. They are placed with the roots downwards, mostly in rows about three or four inches distant; so that almost nothing but the root is exposed to the weather. This thatch, when on the side of the house which is exposed to the sun, lasts about six or seven years; but when in a

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northern exposure, it continues good for upwards of thirty years. Breckins exposed to the rays of the sun grow brittle, and moulder down.

Crops cultivated.

Of all kinds of grain, oats are here most generally cultivated. Bear and barley, owing to cold seasons, are found to be precarious crops, the product exceedingly various, and in general not heavy. Seed-time from the

Grain.

middle to the end of May. *Blandeared* barley, a mixture half bear and half barley, is cultivated by some farmers; the meal is used in bread. *Masholme*, a mixture of oats, barley, rye, peas, and beans, likewise for bread, was till of late cultivated by almost every farmer. Some small fields are yet cropped with this mixture; but the practice very properly is daily going into disuse. The culture of rye is greatly on the decline. Although the soil in many places of the county would answer the culture of wheat, yet the wet climate, the early and late frosts, and other circumstances, render it a very precarious and unprofitable crop. Not more than 100 acres in the county are annually cropt with this grain, sown about the month of September; the produce is from six to ten bolls *per* acre. It is now impossible to ascertain how long this grain has been cultivated in this county. It is evident from some wheat lately found in a vault under ground at Castlecarry, in the immediate neighbourhood at Cumbernauld, that this grain was used by the Romans when in Scotland; but where it has grown is uncertain. The ears found in the vault were thick and broad, and upon the whole were fully larger than our best wheat: they were black with age; some of them were considerably hard, but others, by the touch, crumbled down into powder.

Turnip and potatoes.

Turnips are not much cultivated in this county; but the culture of potatoes is universal. Not a family almost but has a piece of ground cultivated with this ve-

liable exotic. In West Kilpatrick and many other places, they are put after the first crop of oats, and the ground, without being ploughed, sown next year with oats. Where peas or beans are cultivated they are arranged in the same course with them. Potatoe culture, for improving waste lands and mossy soils, is universally acknowledged here to be of great advantage. Nothing but cutting down brushwood and removing great stones is done to the land previous to planting the potatoes. They are always in this case planted in the lazy-bed way; the ditches, which are necessarily dug at the sides of the beds, serve instead of drains. The hoeing and dressing up the plants destroy the weeds, and pulverise the soil, which is likewise enriched by the dung used: the expences are in general fully repaid by the first crop, whilst the ground is prepared for oats next season. But the most common mode of culture is by planting in drills and horse-hoeing. Agriculture.

Flax is cultivated to a very considerable extent in the county. There is scarcely a farmer, villager, tradesman, or cottager, who does not rear a sufficient quantity at least to occupy the females of his own family in spinning. A clay soil, or a flat soil capable of retaining moisture to a certain degree, is preferred. A very dry soil and season indicate a poor crop both in quantity and quality. The ground is always very correctly cultivated or well pulverized, sometimes even by beating the clods with a wooden mallet when this crop is to be used. From eight to ten pecks of Riga seed are sown upon an acre. The crop, when dressed by the mill, amounts in quantity to from twenty to twenty-eight stones. Where this crop has been frequently used, the weeding which it receives renders the land so clean, that at length weeding becomes unnecessary, as the soil comes into better order than the best garden ground. It is not uncommon for farmers to Flax.

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let a part of their lands to cottagers and tradesmen for a crop of flax. The farmer ploughs and harrows the ground in these cases. The seed is usually sold for the purpose of feeding cattle. The inhabitants of the parishes of Kirkintilloch and Cumbernauld obtain from the trustees for the improvements in Scotland large premiums annually for the growth of flax. Not a little of it is manufactured into yarn by the industry of the farmers wives and female servants.

Grasses.

Clover and rye-grass are here cultivated to a considerable extent. When sown with flax they succeed uncommonly well, as the crop is early removed from the field, and the land is left to the grass alone. White clover is every where a native of the county; and, if the land is kept dry, it grows in abundance. The culture of

Woad.

wild woad or dyers woad (*reseda lutcola*) was a few years ago tried by some linen-printers. This plant, which is much used in the linen-printing business for a dye-stuff, is always at a high price; and of late, owing to a great demand for it, very scarce. More than L.1000 Sterling worth of it is annually consumed in the printfields on the water of Leven. The attempt to grow it here was far from being discouraging: some small fields of a dry light soil were planted with it, and produced good crops. It was sown in drills in the month of August, and reaped in the same month next year. Drying-houses, some of which are in every field, were found to be excellently adapted for the purpose of drying it; and the colour made from it was equal to any made from the plant procured in the foreign market. The produce of an acre was worth from L.10 to L.15 Sterling. Of late, however, the culture of the reseda has been totally neglected. The printers who made the trial were, by the increase of their business, obliged to occupy in bleach-

ing, &c. all the ground they could get in the neighbourhood, and to apply their attention wholly to their own trade. The cultivatation of it never attracted the notice of the neighbouring farmers, who were altogether unacquainted with the plant, and the management proper for it, and who likewise had no turn for making experiments out of their usual mode of practice. Agriculture.

Some time ago the cultivation of madder was attempted by Mr Stirling at Ardal, on the banks of the Leven. The crop succeeded tolerably, but the culture was discontinued, because at that time no mill could be procured in this country for grinding it. Ferns, provincially called *breckins*, have already been mentioned as used for thatch. They are very valuable, in many respects, to the inhabitants of the higher districts of the county; But they do not need to be cultivated; they grow naturally in woods and banks, and not unfrequently in the open field. Some islands in Lochlomond are almost wholly covered with them. Sir James Colquhoun's tenants have liberty to cut them, on condition that they work a day or two for him in harvest. The ferns are cut with scythes or hooks from the 20th of August to the middle of September. They are spread on the ground, and dried like hay, and afterwards put into stacks for use. Horses are not averse to eat them when well prepared, but they are chiefly used for litter. Having served the purposes of the stable, they make a very copious and valuable addition to the dunghil. It is a pity that this plant should be so much neglected in many places where it grows in great luxuriancy.—In the moors and high districts of the county, *heath* of different kinds grows in great plenty and to a considerable size. It has, however, for several years past, been gradually decreasing, owing to the sheep that occasionally pasture upon it. One peculiar advantage at- Madder.

Agriculture.

Pastures.

tending sheep-walks in this county is, that during the greatest falls of snow they are open at the sides of the lochs, with which they are plentifully intersected. In the neighbourhood of these lochs the deepest snow seldom lies above a day or two at the most. This is owing to warm particles of air that are perpetually exhaled from the surface of the water. In this respect they are superior to many of the sheep-pastures in the south of Scotland, which are frequently *close* for several weeks together; but they are greatly inferior to them in many things.

The mountains here are mostly precipitous and rocky. Not a few parts of them are entirely destitute of verdure; and large portions of them are covered with straggling shrubs and trees, which are always a detriment to sheep. Large tracts of the declivities consist of a soil perpetually wet and spouty, which can afford but a scanty portion of good pasture for sheep. The places, however, that are naturally dry are covered with the finest grasses, which, owing to the abundance of rain in this climate, preserve a perpetual verdure and luxuriancy. Of these grasses the sheep's fescue, the sweet vernal grass, the crested dog's-tail grass, and the fine bent-grass, bear the greatest proportion. Sheep-breeding, so as to become a business, was introduced into this county and the West Highlands, about the year 1747, by John Campbell of Lagwyne, Esq. who then lived at Glen Molloch, in the parish of Luss. Before that time the country was stocked with black cattle, that brought but a small return to the owners. Besides the cattle a few goats were reared in the mountains, and some small sheep, natives of the county; they were white-faced, long-legged, and the wool was remarkably short. They are now succeeded by the small black-faced breed originally purchased at the fairs of East Kilbride, in the county of Lanark. The number of sheep

at present in the county is supposed to amount to at least £6,000. Agriculture.

A small number of wild *roes* are permitted to inhabit the mountainous regions of the county; they lodge mostly in rocks inaccessible by sheep, though sometimes they are discovered brousing in the woods. The proprietors will not permit them to be shot or annoyed.

Of cattle in the southern districts of the county, the Highland breed are wearing fast out, and giving place to those from Airshire, on account of their superiority for the dairy: but considerable quantities of cattle are still purchased from the Highland graziers, and after being kept here for a winter are sold to the English graziers. The natural grass on the declivities of the high grounds of the well-watered districts, together with the bulky produce of the low grounds, render a considerable part of this county very fit for wintering cattle. The *food* of cattle is chiefly grass, either green or dried. Straw is universally given both to horses and cows. A few cows are occasionally fed with draff and the refuse of the breweries in Dunbarton and Kirkintilloch, and a very few with turnip. Green clover is preferred to every other green crop for cows; it greatly increases the quantity of milk, and gives it no bad taste. It is believed that milk from grass-food is much richer in butter or cheese than from food of any other kind. Horses, during winter, often get their supper of boiled meat. It is a mixture of light corn, oat-chaff, and sometimes the refuse of beans and pease. They are boiled for the space of an hour in a pot or cauldron that is generally built in a furnace in one of the out-houses. This boiled meat is reckoned extremely good for horses; it makes them keep their strength and look well. Cows, after calving, are also fed with it, but with the addition of some good corn. It is given them twice Cattle.

Agriculture.

a-day for some weeks after calving, or until the grass is plentiful. Sometimes a handful of salt is added to the mixture. In many places *potatoes* make a principal ingredient of this kind of aliment. When thus used, they are washed clean and cut into small pieces with a knife or instrument for that purpose, or they are bruised in a stone-mortar with a wooden mall. This precaution is used to prevent them from sticking in the horses throats. The potatoes are not boiled, but mixed raw with the other ingredients. Oat-dust from the mill also makes part of the mixture.

Extremely few swine are reared in this county, either for private use or for the market. A variety of the dunghil fowl has sometimes been found in the mosses, and domesticated, by taking the eggs from the wild bird's nest, and taking care to have them hatched and reared by a common hen. This variety is called the *heath-fowl*, and is but rarely found either here or in the northern counties Scotland. It is not so large as the common dunghil-fowl; but the eggs, for the most part, are equally large with ducks-eggs, and are very fine. The hen continues to produce eggs for a long time, and seldom inclines to hatch. When the eggs are hatched by another hen, care must be taken to break the shell after it is chipped, for it is frequently so hard that the young chick cannot break it so as to disengage itself. The colour of the chick very much resembles that of a partridge; but in fowls come to maturity the colour is commonly red or brown, mixed with spots of white and grey. Both cocks and hens are round-crested, and often the crests are so large that they hang over the eyes, and must frequently be clipped. They are smooth-legged; and the length of the leg is in proportion to the body. The heels of the cock are short, and not very well adapted for fighting; both cocks and

Heath-fowl.

hens, however, fight keenly with the bill, which is thick, short, and hooked. Although they are fully domesticated, yet they are fond of swamps and woods, and are extremely greedy of worms and other reptiles, in quest of which they wander to a considerable distance. They will frequently leave their companions of the dunghil, and, in search of worms, &c. follow any plough that may be going in the neighbourhood. They are more easily supported than common fowls, and their eggs bring nearly double the price of ordinary eggs. Agriculture.

Though almost every farmer in this district keeps cows, the county is not celebrated on account of its dairy. Much butter is salted for sale in wooden vessels or barrels; sometimes the whole is covered with a strong pickle, by boiling in water common salt with a little saltpetre. This last ingredient is thought to preserve the butter very long. *Hung cheese* is not unfrequently made in several places of the county. It is called *hung* when the curds are tied up in a cloth or net, and to get quit of the whey are hung up instead of being put under the press. This kind of cheese is thought to be richer or fatter than had the curds been treated in the ordinary manner, because the whey is not forcibly drawn off, but allowed to drop at leisure. It is the general opinion in this county, that when the whey is forcibly taken from the curds the cheese is thereby rendered poor, because a considerable quantity of what constitutes the richness of the cheese is forced away with the whey. Dairy.

Till about thirty or forty years ago, none of the country was inclosed except a few fields adjoining to gentlemens seats. From that time inclosing of land has been daily on the increase. One third of the county, however, is yet open, or but roundly inclosed; that is, the farms are inclosed but not subdivided. The deficiency will soon be Inclosures.

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made up. Not a year passes but several thousand acres are surrounded with fences. The size of inclosures of arable land is commonly suited to the extent of the farms, and consequently small. Inclosures are, at an average, from eight to ten acres. One field, however, containing three hundred acres, was lately inclosed by a stone-dike, in the parish of Row, by the late Sir James Colquhoun of Luss, Baronet. It cost him above L. 300 Sterling. That gentleman, for some years past, built annually several thousand roods of stone-dikes, and planted at least thirty thousand young thorns. Hedge and ditch is the most common sort of fence; but, in many instances, no attention is paid to the soil in which the thorns are put, and they are often planted among the worst of the earth dug from the ditch, which never before saw the light, and consequently was never ameliorated by culture: hence many of the thorns are apt to fail. Hedges faced with stone are far from being uncommon, especially on the sides of highways. According to this method, a dike from one to two feet high is built of stone without lime. The thorns are placed horizontally under the uppermost course of stones, which are chiefly flags, if they can be got; a small ditch, or rather drain, is cast before the dike, and the earth thrown up behind it. Sometimes the hedge is planted perpendicularly on the top immediately behind the stones, and secured by a pailing. In this way it commonly grows very well. The former way, however, is generally preferred, as the hedge requires no care to be taken of it after planting, and the expence of the pailing is saved These fences, in either of the methods, resemble small sunk fences. In the high parts of the country wooden fences are not uncommon: they consist of posts made of peeled oak, or branches of elm or fir trees set upright in the earth, at the distance of a foot and a half from each

other, and strongly intertwined with brush-wood or brooms. This sort of fence is called *stab and rice*. Stone-walls made without mortar are also not unusual. Agriculture.

Lime is used extensively as manure in this county, and is allowed to remain some time spread upon the surface before it is ploughed down. *Sea-ware*, in many places of the county, is used profitably as a manure. It is of two kinds; viz. what is cut from stones in the sea, and what is driven upon the shore by the tides, and which is commonly called *blown wreck*. The former is esteemed the richest, owing, it is believed, to the greater quantity of salt which it contains. It is cut mostly in the spring-season, chiefly with hooks, at low water. It grows so rapidly, that another crop may be cut in two years afterwards. Some kinds of sea-plants are better than others; the thin broad-leaved kinds are not esteemed. The blown wreck is gathered as soon as possible after it is driven on the shore; for if it is not speedily collected, it is apt to be carried back into the sea by high tides, or blown away by the winds. It is used sometimes as a top-dressing to grass-fields or to grain. It is sometimes stratified with lime, earth, and dung, to be converted into manure. Lime and peat-moss are in some quarters of the county spread upon grass-lands which are meant to be ploughed in the following year. The lime in powder is spread on the surface in autumn, and about sixty or seventy cart-loads of moss are spread over it. Manures.

Few places in Scotland are better furnished with growing woods of different kinds than Dunbartonshire. The woodlands comprehend about 11,800 acres; 6200 acres of which are under natural wood, the rest in plantations. Forest-trees, especially on the banks of Leven and Loch-lomond, thrive amazingly well. The woods are well sheltered by the surrounding mountains, whilst they are Woods.

Woods. never destitute of a sufficient quantity of rain to support their luxuriancy. Natural woods, of which the oak makes a considerable part, are for the sake of the bark generally cut every twenty years. Only the oak, mountain-ash, and willow, are peeled. Different opinions have been formed about the age of bark most proper for tanning. Some affirm, that at twenty years old it has not acquired sufficient strength to make the leather good. In some cases, especially if the wood is not of a luxurious growth, the observation is just. Most tanners in the country, however, prefer the Highland bark at twenty years old to any other, although at a greater age. But it is believed by some judges, that in this district bark at twenty-five or twenty-six years of age would be better for the tanner, and more profitable for the proprietor, than at twenty. The growth of a tree, in this healthy climate, is supposed to be as much in one year, between twenty and thirty, as in any two, at an average, before twenty; so that at the age of twenty-six, there will be one-third more bark than at twenty; and the timber being then fit for husbandry-utensils, is a great deal more valuable. The proprietor, however, counts upon the interest of the money lost by this delay, and prefers cutting the wood at nineteen or twenty years. Oak-bark, in some unfavourable places, if it is older than forty or fifty years, begins on the outside to be *corky*; a technical expression applied to the external part of it when it becomes hard and sapless. In this case it is unfit for tanning leather: but of this kind a considerable proportion is commonly mixed with bark imported into Scotland; which is never the case with bark from the Highlands, where the trees are seldom permitted to arrive to any great age. The price of the timber commonly defrays the ex-

pence of cutting and barking, so that the profits arise chiefly from the bark. Woods.

The mode of cutting wood in this county has, within these last fifteen or twenty years, been greatly altered. It was formerly the universal practice to cut the tree over a few inches above the surface of the ground; the piece left was called the *stool*, and was intended to set off young shoots for the future growth; which, in its turn, was likewise cut a few inches above the old stock. By this means the stool, in a few cuttings, became very large and unprolific. It was believed, that were the tree cut away close to the surface of the ground, it would either not grow at all, or the shoots would be very weak. This opinion is now by experience proved to be false, and that the old practice adopted in consequence of it was hurtful. The shoots coming from the old stock, that had gradually accumulated to an enormous size, are now found to be comparatively dwarfish. This discovery was owing to avarice or fraud. Some people employed in barking trees, thinking it a great pity to let the bark remain on the stools, peeled many of them down to the ground. This practice is now called *peeling below the axe*, and the former is termed *peeling above it*. Upon the discovery of the fraud the proprietors were greatly enraged, but they soon found that the shoots from the root were better than those from the stool. This is easily accounted for, if we consider that when the new plants spring from the root, on a level at least with the surface of the ground, they acquire new roots for themselves, and consequently must be more vigorous than shoots from the old stock. Soon after this was known, the old stools were at great expence cut or sawed over close to the ground; not a few were burnt down; a circumstance that improved rather than injured the next growth; for thereby the moss, &c. that had accumulated

Woods. on the old shot was destroyed, and the ashes became excellent manure. If woods are not previously inclosed, this must immediately be done upon their being cut, to prevent the young growth from being destroyed by cattle. The value of natural wood is here very considerable. In those woods in which the oak prevails, the annual profit is estimated at above L. 1 Sterling *per* acre, which is a far higher rent than could be obtained for the same land if employed in any other manner. The ground is in general unfit for tillage, and under pasture would bring a very small rent. So sensible are many gentlemen of this county of the value of woods in a district in which, on account of the wetness of the climate, crops of grain are precarious, and where shelter is wanted to improve the pasture, while at the same time conveyance by water is generally practicable, that large portions of land have been inclosed for planting, and the plantations appear universally to prosper. In particular, on the estate of Arden, very extensive plantations have been made; and the late Sir James Colquhoun, in fifteen years, planted upwards of 1000 acres. A single inclosure at Rosedoe contains 500 acres. The most recent plantations in the county chiefly consist of larix, Scottish fir, &c. The proprietors here seem to vie with each other in restoring to the country the forests by which it was adorned in ancient times, but which, at a later period, appear to have been so unprovidently and wastefully destroyed. The plantations of Garscube, Camus-Erskine, Roseneath, Levenside, Cumbernauld, Westertown, Cameron, Ross, Garthmore, Luggie bank, Balvie, Achinterlie, &c. are thriving remarkably well. Among the natural wood in the county is the *yew* and *holly*; these are mostly confined to the woods of Luss and Arroquhar. Inch-Conachan, an island in Lochlomond, contains several thousand large yews; a

Yew and holly woods.

plantation of that kind of wood unequalled perhaps in Europe. It is not known whether they are natural or planted, but most probably the latter; and were intended for making bows before the invention of gunpowder. It is impossble to say, in the present progress of the arts, to what useful purpose they may yet be applied. The largest yew is at Rosedoe; it measures 12½ feet in circumference, and is very high. Not far from it is a sweet chesnut, the trunk of which is 12½ feet round. The holly trees here have also attained to a considerable size. The late Sir James Colquhoun received at one time the sum of L. 70 for as many of them as covered probably about an acre of ground; they were intended to be used for making blocks for a neighbouring printfield. Vigorous shoots immediately sprung up from the old stocks. Woods.

On the estate of Bonhill is a decayed ash-tree, of which the age is unknown. Within the trunk, which is hollowed out by age, the proprietor has formed an apartment, which is nearly nine feet in diameter, and ten in height. It is lighted by two windows, has a table in the middle, surrounded by seats which can accommodate a considerable number of people.

Among the great variety of natural wood in this county is the Dutch myrtle or gael (*myrica gale Linn.*). This agreeable shrub occupies, in different parts of the county, about twenty or thirty acres of marshy ground, and abounds on the banks of Lochlomond. It is a valuable vermifuge. A few of the dried leaves and branches, occasionally spread among wearing apparel, not only diffuse a pleasing smell, but completely protect them against injury from moths or other vermin. It is also valuable for the same purpose in the manufactories in which cotton is spun. Dutch myrtle.

We shall here insert a list of the wild animals that in-

Animals. habit the forests, mountains, fields, and waters, of this district; taking notice both of their English name and of that which they receive in the Scottish dialect.

Quadrupeds. Of quadrupeds are found, the fallow deer, roe, fox or tod, wild cat, badger or brock, pine martin, polecat or fumart, common weasel or whitret, sloat or ermine, otter, common hare or mawkin, alpine or white hare, rat, water rat, field mouse, common mouse, short-tailed mouse, fœtid shrew mouse, mole or modewart, urchin or hedgehog, common bat.

Land birds. The following land-birds are found: Ringtail eagle or black eagle, sea eagle, osprey, kite or glead, common buzzard, moor buzzard, hen harrier, ringtail, kestrel, hobby, sparrow hawk, long-eared owl, tawny owl, brown owl, white owl or howlet, great shrike, raven or corby, rook or crow, hooded crow or hoody, magpie or piet, jay or jaypiet, jackdaw or daw, cuckoo or gouk, kingfisher, creeper, black cock, grous or moorfowl, ptarmigan, partridge or partrick, ring dove or cushet dow, fieldfare or feltifare, throstle or maevis, redwing, blackbird, ring ouzel, water ouzel or water crow, chatterer, bullfinch, greenfinch, common bunting or buntling, yellow hammer or yellow yeldring, red sparrow, snowbunting or snowfleck, goldfinch or goldspink, chaffincher or green lintwhite, brambling, sparrow, linnet or lintwhite, flycatcher, skylark or laverock, woodlark, titlark or tittling, white wagtail, yellow wagtail, redstart, redbreast, yellow wren, golden-crested wren, wheatear, whinchat, stonechatter, whitethroat, great titmouse, blue titmouse or oxeye, colemouse, long-tailed titmouse, house swallow, land martin, swift, goatsucker.

Water fowls. Of water fowls are found, the heron, woodcock, common snipe, jacksnipe, lapwing or teuchit or peesweep, common land piper, dotterel, pied oyster catcher or sea

piet, water rail, great crested grebe, dusky grebe, little grebe, puffin or tamnoddy, northern diver, imber, speckled diver or Arran-ake, red-throated diver, common seamall or seamaw, tarrock, lesser tern, goosander, red breasted goosander, the smew, wild swan, wild goose, golden eye, mallard or common wild duck, pochard, wigeon, teal, cormorant, shag or skart. Animals.

Of reptiles are found, the frog or puddock, toad or tead, scaly lizzard or ask, brown lizzard, viper or adder, blindworm. Reptiles.

Of fish are the following: Lamprey or lampereel, eel, Lochlomond flounder or fluke, perch, salmon, sea trout, trout, charr, guiniad or powan, samlet or parr, pike, roach or braise, minnow. Fish.

It may be remarked, that in almost all the Scottish waters or small streams, the first of the fish above enumerated, the lamprey, abounds; but nobody will eat it, on account of its resemblance to a serpent. When accidentally caught they are destroyed with great inveteracy. Even the common eel is no general favourite, chiefly for the same reason.

The minerals of this county are valuable in proportion as the territory recedes from the tract of the Grampians, which in this quarter may be considered as terminating in their south-western point upon Lochlomond. In the parish of Old Kirkpatrick, both coal and lime are brought from the bowels of the earth. In the parish of New Kirkpatrick there are two colleries, one at Knightswood and the other at Cullich; both of which have been wrought at early periods. The coal at Knightswood is light and friable, contains little sulphur, does not cake, burns quickly, and leaves a small quantity of white ashes. The main coal is of the depth of from eighteen to fifty fathoms, according to the state of the surface. The dip, or the direction in which the coal descends into the earth, is Minerals. Coal and lime.

Minerals. from north-west to south-east; the coal is three feet four inches thick, with six inches of stone in the middle. At Cullich the coal is more heavy, leaves much brown ashes, the small coal cakes strongly; the whole is considerably sulphureous, and makes an excellent fire when mixed with that of Knightswood. The depth of the coal is from thirteen to thirty-six fathoms. At Cullich is also a lime-work. At Cumbernauld, and indeed over a great part of the southern districts of the county, lime is to be found in a variety of quarters. Limestone is here of three kinds, each containing a few varieties. The first is that kind which contains shells, coralloids, and other exuviæ of the inhabitants of the ancient ocean. The stone has for many years been wrought in great quantities in the parishes of Cumbernauld and East Kirkpatrick. It is blown by gunpowder below ground, and is drawn out by horses on a passage driven into the mine. The limework at Cumbernauld, the property of Lord Elphinston, extends below ground about 200 yards, and is upwards of 400 in breadth. The lime is of excellent quality. At Netherwood, on the brink of the great canal, are limeworks also, nearly as extensive as the former.

Three kinds of lime.

1st, Containing shells;

2d, Moor lime-stone; The second kind of lime is generally called *moor lime-stone*, because it is commonly found in moors and high grounds. It is disposed in a kind of stratum of various thickness. The stone is of different colours, as white, blaish, yellowish, brown, and carnation. The surfaces of the fragments have the appearance and touch of a coarse grit. This is owing to small calcareous crystals, of which the stone seems to be for the most part a congeries. This stone is quite destitute of marine productions. The lime produced from it is not bad, though not in general so good as from the stone in Cumbernauld and Kirkpatrick. Unfortunately it is found chiefly in places remote from coal; several

attempts, however, have been made to burn it with peat. This has at several places been done with success, both by stratifying the limestones with dry peats, and by placing a quantity of peat, to be occasionally supplied, below a large body of limestone supported by a rude and open arch. Minerals.

The third kind of limestone is what is called *camstone* or *glenstone*, because mostly found in the bottom of glens. It is of a fine mixture; the fractures are smooth to the touch, and of a greyish and sometimes reddish colour. All the varieties of this kind of stone are quite destitute of marine productions. It contains a considerable proportion of clay, and by the action of the air falls down into small pieces. It lies in thin strata embedded in till. Some natural sections in the sides of glens, in the parish of Dunbarton, exhibit to one view more than a dozen of these strata from three inches to a foot in thickness. A good deal of the stone is burnt for manure; but it possesses this uncommon quality, that when thoroughly burnt, and while it is red-hot, it must be slaked in the kiln; for if it is allowed to cool slowly, it will not afterwards fall down into powder. That it may more easily be slacked, the kiln is commonly built at the side of a rivulet. When the operation is to be performed, a considerable number of people assemble with pitchers, which they repeatedly empty on the kiln till all the stone is wet. The kiln, in time of slacking, emits very loud explosions. It is probable that the stone, as it falls down by the action of the air, might be advantageously used for manure without burning. 3d, Camstone.

In the parish of Luss there are two slate quarries; one upon the estate of Camstraddan, and the other upon the estate of Luss. Large quantities of slates are annually Slate.

Dunbarton. sent from these to Greenock, Glasgow, and Paisley, and large quantities also across Lochlomond to Stirlingshire.

It may be remarked, as a sort of mineral curiosity, that on the peninsula already mentioned, which forms the parish of Row, and where the Duke of Argyle has a seat called *Roseneath*, it is understood that rats cannot live. When imported they die within a year. A West India planter carried out some casks of Roseneath earth to kill the rats that were devouring his sugar canes; but the experiment was unsuccessful: and thus a source of riches, or a valuable export, was lost to this part of Dunbartonshire.

The only royal borough in this county is Dunbarton; it was made a royal borough by King Alexander the Second in 1221. It is built upon the eastern bank of the Leven, which almost encircles it; it has a good harbour, where large brigs are safe in all weathers. It is situated in west longitude 4° 32′, north latitude 50° 30′. It is upon the whole an inconsiderable town, and the greatest number of its houses are old. As usual in sea-port towns, young persons are fond of a sea-faring life, and manufactures are apt to be neglected. There is here, however, a very extensive and flourishing manufacture of crown and bottle glass. But Dunbarton is chiefly remarkable for its castle, which commands the navigation of the Clyde, and is the key of the North Highlands: it has at at all times

Dunbarton castle. a regular garrison. The castle of Dunbarton is a very picturesque object. The rock divides about the middle, and forms two summits; the craggy sides are finely broken; and the buildings upon it, though not of themselves beautiful, have a good effect; and, as Mr Gilpin justly remarks, serve to give it consequence. The entrance of this fortress is by a gate at the bottom. Within the rampart which defends the entrance is the guardhouse and lodgings for officers. From hence the ascent is by a long flight of

ROCK AND CASTLE OF PENMAENMAWR

stone steps to that part of the rock where it divides: here is a battery, barracks for the garrison, and a well or reservoir always filled with water. Above these, on the lower summit of the rock, are several batteries mounted with cannon. The access to the higher and narrower summit is very difficult. From the upper batteries are some very extensive views. Looking towards the north is seen Lochlomond bounded by rugged mountains; among which Benlomond is conspicuous, rearing his pointed summit far above the rest. Between the lake and Dunbarton is the rich vale of Leven, enlivened by the windings of the river. Turning eastward, the Clyde is seen forming some fine sweeps. Douglas castle appears on the left, and Lord Blantyre's house on the right. Beyond the Clyde the distant country is very rich; and on a clear day the city of Glasgow may be discerned, particularly towards the evening. The prospect down the Clyde is no less interesting. The river expands into a large estuary, occupying a great part of the view; beyond are high mountains, whose rugged outlines and surfaces are softened by distance, or what painters call aerial perspective; and under these mountains, on the left, are directly seen the towns of Greenock and Port Glasgow. These views are not a little enlivened by the white sails which continually skim the Clyde, bearing the produce of the most distant parts of the world. According to Bede, the ancient Britons called this fortress *Alunth* or *Alcluid*; that is, the place on the Cloud or Clyde (in Ossian's Poems *Balclutha*): but the Scots or Caledonians, who were formerly separated from the Britons by the river Leven, called it *Dun Briton*, or the fort of the Britons; because it was within the territory of the Britons. This word was easily corrupted to Dunbarton; and hence we see that the rock or castle has given the name to the town and country. Dunbarton.

Dunbarton. Some parts of the rock of Dunbarton are strongly magnetic, causing a compass, when brought near it, to vary considerably. Indeed this circumstance was observed by Buchanan. In the upper part of the castle, he observes, is a vast piece of rock of the nature of a loadstone; but so closely connected and fastened to the main rock, that no manner of joining appears. The late ingenious professor Anderson of Glasgow made several experiments on the magnetism of this rock, and marked with paint those parts which possessed magnetism, with the direction of the poles. Considering that the rock is of the basaltic kind, it is not surprising that it should be in some degree magnetic. All basaltic pillars that have been tried have been found so in a greater or less degree. Those of the giant's causeway on the north-east coast of Ireland, and those of Staffa, are strongly so; the lower parts of the pillars possessing a north polarity, and the higher part a south, just in the same way, and for the same reason, that iron bars do, which stand long in an erect position. Indeed this might be expected, *a priori*, from the nature of basaltes; a considerable part of this substance consisting of iron approaching to a metallic state.—The true Scottish thistle, a rare plant, having its light green leaves variegated with white, grows in considerable quantity about the bottom of the rock, and sparingly even on the very top. According to Pennant, the Britons in very early times made this rock a fortress; it being usual with them, after the departure of the Romans, to retreat to the top of craggy inaccessible mountains, to forests and rocks, on the shores of the sea. Boethius, however, asserts that the Scots or ancient Caledonians were possessed of it some ages prior to the Britons, and that it resisted all the efforts of Agricola, who besieged it. It is undoubtedly a fort of great antiquity; for the venerable Bede observes,

that it was the strongest fortification possessed by the Britons in his days. In former days it was deemed impregnable. History, however, informs us, that it was reduced by famine in the reign of Egbert, king of Northumberland, in the year 756, and by escalade in 1571. This being a bold and singular enterprise, we may take the liberty of relating it at some length, as it may be amusing to those not well acquainted with Scottish history. At that time Lord Fleeming was governor of the fort by commission from the banished queen. It was the only place of strength of which the unfortunate Mary retained possession; and its retention was looked upon as an object of importance by her friends, as it was the most convenient place in the kingdom to land any foreign force that might be sent to her assistance. The strength of the place rendered Lord Fleeming more secure than he ought to have been, considering its importance. He boasted to the king of France, that he held in his hands the fetters of Scotland; and whenever the French had leisure from other wars, if they would lend him a little assistance, he could easily put them on, and bring the whole kingdom under their power. This confidence of the governor was increased by the treachery of the garrison at Edinburgh castle, who had lately revolted. The sickness of the regent, also, who was severely afflicted with the gout, and at that time much hurt by a fall from his horse, was a circumstance not calculated to abate it. He was likewise encouraged by a truce obtained for them by Elizabeth, queen of England, which was to expire the last day of March. These considerations rendered him and his garrison so secure and negligent, that they frequently spent the whole night in riot and festivity in the neighbouring town of Dumbarton, with the same thoughtlessness as if the country had enjoyed the most profound peace. The plan of surprising

Dunbarton.

Capture of Dunbarton castle.

Dunbarton. the garrison was first suggested to the regent, then at Glasgow, by a common soldier, who had served in the fortress, but had been disgusted by what he supposed to be ill usage. While he lived in the garrison, his wife used often to visit him; and being accused (perhaps not unjustly) of theft, was punished by order of the governor. Her husband, as Buchanan observes, being an uxorious man, and persuaded of her innocence, burned with revenge; he deserted to the regent, and promised, that if he would assign a small party to follow him, he would make him master of the fortress. The regent, though he saw the importance of possessing the castle, at first hesitated from want of confidence in the man, or in the means which he proposed. This being perceived by the soldier, he instantly said, that as they seemed to distrust him, he would go himself, and be the first man to reach the walls. "If you will follow me," said he with soldierlike bluntness, "I will make you masters of the place; but if your hearts fail you, then let it alone." The man appeared confident and resolute: in short, the attempt was deemed worth hazarding; it being thought proper to risk almost any danger for such a prize. The expedition was committed to Captain Crauford, a bold and excellent soldier. The first of April was the day fixed on for the execution of this daring attempt; as the truce granted to the rebels through the mediation of the queen of England would then have expired. In the mean time ladders and other necessaries were prepared, and the whole was kept profoundly secret. On the evening of the 31st of March, an officer of the name of Cunningham was sent with a party of horse to guard all the avenues to the castle, that no intelligence of the design might reach the governor. Crauford followed him with a small but determined band; the place of rendezvous was the foot of the hill of Dun-

buc, situated about a mile and a half from the castle. Here Crauford informed the soldiers of the design of their expedition; he showed them the person who was to lead them on, and had promised first to mount the walls; and told them that he and the other officers were determined to follow. The soldiers were easily persuaded to follow their leaders; the foot immediately proceeded towards the castle, while the horse were ordered to remain at Dunbuc, to assist them in their retreat, should the enterprise miscarry. In their way to the rock two circumstances occurred which disconcerted them; the bridge over a brook which runs between the fields was broken down, and a fire appeared suddenly at a small distance from it. This led them to suspect that the design had been discovered; that the bridge had been broken down to stop them; and that the fire had been kindled by the soldiers from the garrison to discover or prevent their approach. But a select band, resolutely bent upon their object, were not to be repulsed or intimidated by trifles; the bridge was soon repaired so as to be made passable, and the scouts who were sent towards the place where the light was seen, could find no appearance either of fire or light, which gives Buchanan reason to suppose that it had been an ignis fatuus or meteor of some kind. Dunbarton.

When they arrived at the bottom of the rock, the night was far advanced, and they were afraid lest the clearness of the sky, which was covered with stars, and the appearance of day-light, should discover them to the centinels who watched above. The mist, however, which generally at this season of the year hangs heavy over rivers and lakes, had overspread the upper regions of the castle; a circumstance esteemed fortunate by the officers, and by the men superstitiously regarded as a good omen.

It was at the summit of the rock that the assailants

Dunbarton. made this bold attempt, because in that place there were fewer centinels, and their guide assured them they would find a good landing. Here, however, they met with an accident which had nearly frustrated the whole design. The first ladder was scarce fixed, when the weight and eagerness of those who mounted brought it to the ground; and though no person received any injury by the fall, yet they feared that the noise might alarm the centinel. Listening a moment, and finding all still, they proceeded again, and placing their ladders with more caution, several of them attained the first landing; there they found an ash-tree growing out of a cleft in the rock, to which they tied ropes, and then drew up their fellow-soldiers. Their ladders were made fast a second time; but in the middle of the ascent they met with an unforeseen difficulty. One of their companions was seized with a sudden fit, and clung, seemingly without life, to the ladder. All was at a stand; to pass him was impossible; to tumble him down the rock cruel, and might occasion a discovery; but Captain Crauford's presence of mind did not for a moment forsake him. He ordered the soldier to be tied fast to the ladder, that he might not fall when the fit was over, and turning that side towards the rock, they mounted on the other without difficulty. Day now began to dawn, and there still remained a high wall to scale; but, after surmounting so many greater difficulties, this was soon accomplished. Ramsay the guide, and two soldiers, reached the summit; he leapt down into the castle, and was set upon by three of the guard. He defended himself with great courage, till his fellow-soldiers, seeing his danger, leapt down after him, and presently dispatched the assailants. The rest of the party followed as quickly as possible, with repeated shouts and the utmost fury, and took possession of the magazine and cannon. The officers and soldiers of the

garrison being alarmed, ran out naked and unarmed, and were more solicitous about their own safety than making resistance. The governor, Lord Fleeming, slipping down part of the rock, and descending along a bye-way, was let out at a postern gate into a small boat which was under the walls, and fled into Argyleshire. After the principal prisoners were secured, and the soldiers had leisure to examine the path they had taken, it appeared to them such a tremenduous precipice, that they declared that if they had foreseen the danger of the service, no reward whatever should have induced them to undertake it. Dunbarton.

The community of Dunbarton possess an undivided common adjoining to the town, which, like all such property, is suffered to remain destitute of improvement. It contains about 200 acres of rich land, but is mostly overflown by the water of Leven at high tides. It is pastured with cows belonging to the burgesses, who pay *in cumulo* to the town's treasury the sum of L 3 : 6 : 8 Sterling *per annum*, besides paying the herd's fee. They have the liberty of putting on the common as many cows as they please. Sometimes the rent for a cow is 2s. 6d. or 2s. *per annum*, according to the number of cattle put on it by the burgesses. It is always greatly overstocked. This piece of land, a considerable portion of which is now constantly overflowed by the river, was in a remote period destroyed by an inundation from the Clyde or Leven, as appears by a royal charter granted in favour of Dunbarton *anno* 1609, in which charter mention is made, "That the burgh was so much destroyed and damaged by the rapid force and course of the rivers of Clyde and Leven, between which rivers the aforesaid burgh is situated, that not only a great part of the lands of old granted to the foresaid burgh is overflowed, and the foundations of many houses, tenements, and gardens overturn-

Villages. ed, but also that all the rest may in a short time fall and be overturned by the force of the said rivers." It is granted by this charter, that *dikes or bulwarks* be made to confine the river Leven within its old bounds. The sum appointed by government for this end was 25,000 merks, to be "levied from all the lieges of the realm, besides 12,000 merks, to be paid out of the readiest of his Majesty's revenues in Scotland." There is no evidence that the money was levied, but there are vestiges yet to be seen of a dike or bulwark of large stones.

Kirkintilloch. Kirkintilloch, in the southern part of the county, is a very ancient borough of barony. It is pleasantly situated on a small stream, the Luggie, that runs into the Kelvin; it was erected into a borough about the year 1170, in favour of William Cumming, baron of Leindzie and lord of Cumbernauld. It still holds of Lord Elphingston, a successor of the Fleemings, earls of Wigton, in the barony of Cumbernauld, and pays twelve merks Scots of yearly feu-duty. Its burgesses elect their own magistrates independently of the lord of the barony. The magistrates are two bailies, annually chosen. They have power to fine and imprison offenders, and to banish them from their town. Many weavers employed by the Glasgow manufacturers reside here; and a large portion of the manufacturing spirit of the neighbouring district has extended itself hither.

Villages on the Leven. The other villages in this county are of no great importance, being chiefly the ancient villages where the parish-churches had been built. Upon the Leven, however, two villages have been erected, and an extensive business is carried on in the printing of cloth. The first printfield on the Leven was begun about the year 1768; the other two were erected a few years ago. At first the printing-business was almost wholly confined to handkerchiefs; and in these no great variety of colours was attempted; it was all done by what is called *block-printing*. They afterwards

erected copperplate presses. These presses were at first driven by the hand; but as they required greater force, the man who drove the press was obliged to rest frequently. This kept the other two idle; for there were three men employed about every press. To remedy this, they have constructed some presses to be driven by water; one of which, driven by two men, can print from twenty to thirty dozen handkerchiefs in an hour. These presses were originally almost wholly employed in printing of handkerchiefs, but of late they have improved them so as to print two or more colours upon their finest linens and muslins, leaving the sprigs and flowers to be put on afterwards by the block-printers. At the printfields upon the Leven they have contrived, of late, to do a great deal of work by machinery driven by water, which was formerly done by the hand, and at great expence. Their calicoes, for variety and fineness of colour, are excelled by none in the island. Villages.

The principal village here is called Renton, which has been built upon the lands of Smollet of Bonhill. It consists of several principal streets, running from north to south, intersected by others at right angles. Near the village is erected a monument to the memory of the celebrated Dr Tobias Smollet, author of Roderick Random, Peregrine Pickle, Humphry Clinker, Count Fathom, the History of England, &c. The monument is very lofty, and may be seen from a considerable distance. It is a round column of the Tuscan order, and has a suitable inscription in Latin. Dr Smollet was born here in the house of Dalquharn, an old high mansion built in the stile of the times. He was the grandson of Sir James Smollet of Bonhill, Baronet, a gentleman of a considerable property in this county, a member of the last Scottish parliament, and a commissioner in framing the union. Dr Smollet's monument.

Villages. The father of Tobias, being a younger son, received, according to the custom of his country, only a small share of Sir James's fortune, and dying at an early period of life, left his family, consisting of two sons and a daughter, in circumstances not the most affluent. The two brothers received the rudiments of their education in the school of Dunbarton. The elder, whose name was James, was bred a scholar, and among his acquaintance was distinguished for his address and those talents of wit and humour which afterwards characterised Tobias. A premature death (he having perished at sea off the coast of America) robbed the world of these talents, which, if ripened by time and study, might have shone forth with distinguished lustre. Tobias, the younger, was educated in the medical department, served his apprenticeship to a surgeon in Glasgow, and soon after acted as mate aboard a man of war. In this capacity he was present at the siege of Carthagena, the particulars of which he describes in *Roderick Random* with so much life. Tobias could no longer continue in this situation; his aspiring genius despised the drudgery to which his profession exposed him. He was a man of the most polished manners and finest address; talents which seldom fail to recommend the physician: but with these he possessed a pride which counteracted their influence. He could not stoop to that insinuating flattery, so prevalent in the world, of which even the wise and knowing have oft become the dupes. His mind was chiefly turned to the study of life and manners; in delineating which he is perhaps surpassed by few. In this particular, as a painter of life and character, he has reflected the highest honour upon the place of his nativity, and must ever be considered by his country among the first of her sons in literary reputation. As an historian, he may be inferior to Hume and Robert-

son in refinement of thought and political observation; but when the subject leads to description, or to the delineation of character, his powers appear unrivalled. To the greatest genius he joined the most unremitting application. One proof of this cannot fail to be noticed, which is, that in less than fourteen months he collected materials, composed, and prepared for the press, his whole history of England: an effort to which his narrow and straitened circumstances might have directed him, but to which nothing but the most distinguished abilities and the most vigorous application could have been equal. He married a Jamaica lady, and by her had an only daughter, who was cut off in the bloom of youth. After a life chequered by a variety of incidents, he died at Leghorn, whither he had gone for the recovery of his health, in 1771, in the fifty-first year of his age. Villages.

Since the early days of Dr Smollet, this part of the country is greatly altered. Could he now take a view of his native vale, which he has so interestingly described in his Ode to Leven water, he would no longer there discover tranquil and pastoral scenes, bleeting flocks, and shepherds piping their rural lays, but busy manufacturers engaged in most unpastoral and unpoetical occupations. His ode, however, describes the natural beauties of the spot with such truth and elegance that we shall here insert it.

On Leven's banks, while free to rove,
And tune the rural pipe to love,
I envied not the happiest swain
That ever trode th' Arcadian plain.
Pure stream! in whose transparent wave
My youthful limbs I wont to lave,
No torrents stain thy limpid source,
No rocks impede thy dimpling course,
That sweetly warbles o'er its bed
With white, round, polish'd pebbles spread;
While, lightly pois'd, the scaly brood

Villages.

In myriads cleave thy crystal flood;
The springing trout, in speckled pride;
The salmon, monarch of the tide;
The ruthless pike, intent on war;
The silver eel, and mottled par.
Devolving from thy parent lake
A charming maze thy waters make,
By bowers of birch and groves of pine,
And hedges flowered with eglantine.
Still on thy banks, so gaily green,
May numerous flocks and herds be seen,
And lasses chanting o'er the pail,
And shepherds piping in the dale,
And ancient faith that knows no guile,
And industry imbrown'd with toil;
And hearts resolv'd, and hands prepar'd,
The blessings they enjoy to guard.

Helensburgh.

About twenty-five years ago, a village, called Helensburgh, was begun to be erected by the late Sir James Colquhoun upon the sea-coast. It is now chiefly known as a watering-place, at which hot and cold baths have recently been erected.

Antiquities.

Among the objects connected with the ancient history of this county, it may be proper to notice a hill situated to the westward of the southern part of Lochlomond. It is called *Dun-fian*, or the *hill of Fingal*, supposed to have been one of the residences of that hero. To the northward of it is the water of Fruin, which runs into the lake, and descends from a valley called *Glen-fruin*, or the *Glen of Sorrow*; a name derived from a bloody conflict which took place there between the Colquhouns and M'Gregors.

Battle of the M'Gregors and Colquhouns.

About the year 1594, a body of the M'Gregors, then a lawless and turbulent clan, whose property and residence were in Glenorchay, came down upon the low country of Dunbartonshire, and committed various outrages and depredations, particularly upon the territories of the Colquhouns. These plundering excursions they several times

repeated. In the year 1602 Humphry Colquhoun raised his vassals to oppose them, and was joined by many gentlemen in the neighbourhood, whose property had suffered by the M'Gregors. The parties met in Glen Fruin, where a dreadful combat ensued. They fought with great obstinacy till night parted them, and many were killed on both sides; but the loss of the Colquhouns was very great. The laird of Colquhoun escaped, and retired to a strong castle on the banks of the lake, but was closely pursued by a party of the enemy; they broke into the castle, and found him in a vault, where they put him to death with many circumstances of cruelty. This happened in the month of February. What added to the horror of the conflict, was the massacre of several young gentlemen who had taken no share in it whatever. They had come from the school of Dunbarton to see the battle, which they beheld from a hill above Glen Fruin, but were in the evening shut up in a barn for safety. The M'Gregors discovering them, barbarously put them to death, to the number of eighty. One of the survivors of the Colquhouns, who was now become the chief, supplicated the assistance and protection of James the Sixth against this lawless clan; and in order to excite the compassion of his Majesty, he carried with him a number of women, each of whom displayed a bloody garment of some relation or friend that had been murdered by the M'Gregors. On account of these cruelties the clan of M'Gregor was proscribed as "lawless limmers or villains;" even the name was to be for ever abolished; and at baptism no clergyman was to give it, under the penalty of banishment and deprivation. Happily such times are no more! The legislature has some time since repealed these acts, alleging, that "the causes inductive of them for suppressing the name of Gregor or M'Gregor are now little

Antiquities.

Antiquities. known, and have long since ceased." The tribe is as civilized and peaceable as any other, and distinguished by active virtues.

In the parish of Cardross, a little west of the Leven, upon a small eminence called *Castlehill*, stood, it is said, a castle, at times the residence of King Robert Bruce. In this castle, of which no vestige is now discernible, that favourite prince, as history and tradition informs us, breathed his last. A farm in the neighbourhood still pays the superior a feu-duty called *dog-meal*. This tax is supposed to have been originally imposed for the maintenance of his Majesty's hounds.

Supposed birth-place of St Patrick. In this county are two parishes, called New or East, and Old or West Kirkpatrick *(cella patricii)*. They anciently formed one parish, which was divided in 1649. It is generally supposed that this parish was the birth-place of the celebrated St Patrick, the patron of Ireland. By one account of this personage, his father is said to have been a presbyter and his grandfather a deacon, and that he was carried captive into Ireland, and sold to one of the petty princes of the country, who employed him for some time as a swine-herd. By the tradition of this part of the country, a different account is given of his emigration to Ireland. The Devil being provoked by his sanctity and success in preaching the gospel, sent a band of his auxiliaries, the witches, to annoy St Patrick. The witches fell upon the saint so furiously that he was forced to seek safety in flight. Finding a little boat upon the Clyde, he went into it and set off for Ireland. At that early period it appears, that Satan had not endowed the witches with the art of swimming along the water in an egg-shell, or of riding through the air on a broomstick: they were unable, therefore, to pursue the holy man; but they tore a monstrous rock from a neighbouring mountain, and

hurled it after him with deadly purpose. They missed their aim; the ponderous mass fell harmless, and has since been converted into the castle of Dunbarton. This *true story*, no doubt, proves incontestibly that the celebrated saint of Ireland was born at Kirkpatrick, and gave his name to the place of his nativity. The services which he performed to his adopted country of Ireland were certainly very great, if it be true, as his historians have recorded, that he founded there 365 churches, ordained 365 bishops and 3000 priests, and converted 12,000 persons in one district, baptised seven kings at once, established a purgatory, and with his staff at once expelled from his favourite island every reptile that stung or croaked. Antiquities.

The chief antiquities in the southern part of this county are connected with the celebrated Roman wall, which here crosses the island, and formed the permanent boundary of the Roman empire. It terminated near a fort which is now in ruins, and which stands on a point of the promontory of Dunglass. The fort was blown up in 1640 by the treachery of an English boy, page to the Earl of Haddington, who, with many persons of high rank, were destroyed. The Roman wall is commonly called *Graham's dike*, from a tradition that a Scottish warrior of that name was the first who broke over it. It may be easily traced in a variety of places; and its tract has been minutely described by General Roy in his Military Antiquities of Scotland. It was first marked out by Agricola, and completed in the reign of Antoninus Pius, under the direction of Lollius Urbicus the Roman prætor. It extended from Dunglass, on the Frith of Clyde, to Abercorn, on the Frith of Forth, forming a barrier between the unconquered Caledonians on the north, and the Roman dominions on the south; for though the Romans made frequent Roman wall.

Antiquities. incursions beyond the rampart, the consequences of these were only temporary, that people never having obtained any permanent establishment northward of this wall. The ditch was originally twenty-two feet deep and forty-seven wide, and defended by frequent forts or stations. The Roman wall and ditch would evidently alone have proved a feeble barrier against the Caledonians of the north, had not this artificial fortification been assisted, in a considerable degree, by the natural structure of the territory in this quarter. In the first place, the island is here very narrow, so that the frontier was not extensive. The friths of Forth and Clyde proceed into the country, from the eastern and western seas, to a great distance inland, leaving only a narrow territory, which here forms the continuation of the island. From the centre of the tract between the friths, the river Carron proceeds eastward, and the Kelvin westward. The whole strath or valley of Kelvin seems to have been in ancient times an impassible morass. It formed, therefore, of itself, a natural barrier to the westward. On the other hand, almost as far as Kilsyth, a similar bog extended itself, or rather, perhaps, an arm of the sea, which, though not navigable, must have been of very difficult passage. In many places, both in the eastern and western part of this line of morasses, artificial mounds appear to have been raised to keep the valley under water. The bog continued along the river Carron to the Frith of Forth. The wall was placed adjacent to this line of morasses. Immediately beyond the line of the wall and its bogs the mountainous tract commences which we have already mentioned, and which begins near Dunbarton, and extends eastward to Stirling. These mountains are bare and rugged. Beyond them is the valley of the Forth and of the Kendrick, which proceeds from Lochlomond eastward. The Romans cut down

Roman frontier described.

industriously the whole wood in that valley, that it might afford no retreat to their enemies; and they probably, in like manner, despoiled the ridge of mountains between the wall and the Forth, which form the Kirkpatrick and Stirlingshire hills. By the aid of all these natural advantages and precautions, the Roman wall, before the use of artillery, might form no mean line of defence. Still, however, physical strength, or fortifications of any sort, are of little value when not seconded by courage, and skilful military and civil arrangements. While the Roman empire retained its strength this wall was a formidable rampart; but when their general government became enfeebled by internal corruptions, the barbarians of the north and of the east could not be intimidated nor resisted by physical obstructions. In like manner, when the Chinese empire retains entire its political institutions, its celebrated wall is respected by the Tartars; but when the national government becomes corrupted, and consequently feeble, these hardy barbarians easily surmount a barrier which is not defended by numerous and well paid armies. Antiquities.

Near Kilpatrick, at the village of Duntocher, are the remains of a Roman bridge in the line of the wall. The bridge has a picturesque appearance, the arches being supported by rugged rocks, down which the waters of the brook form a pretty cascade. It has been nearly dilapidated, but was repaired in the year 1772 by Lord Blantyre, as appears from an inscription on a stone placed by the side of it. The part which is Roman may, however, be easily distinguished. Near the bridge of Duntocher, in the year 1775, as a countryman was digging a trench on the declivity of a hill, he turned up several tiles of uncommon form. They were of several different sizes, the smallest being seven and the largest twenty-one inches square. They were from two to three inches in thick- Duntocher bridge.

Antiquities. ness, of a reddish colour, and perfectly sound. The least ones composed the sides of a canal or labyrinth of passages, which were covered with the larger tiles; these last forming a floor, above which, when it was discovered, lay two feet deep of earth. The floor was surrounded by a cistern-wall of hewn stone. The most probable conjecture concerning this building is, that it was used as a *sudorium* or hot-bath by the neighbouring garrison, the Romans almost constantly using this luxury. The stones which composed the bath were used in building a miserable cottage. In the neighbourhood of Duntocher bridge was a Roman fort, now entirely demolished; and the village seems to be partly built with the stones which composed it. On one of these stones, in the side of a cottage, the word N. E. R. O. is still very legible. Some urns have likewise been dug up here. The particular course of the Roman wall will be mentioned when we come to treat of the county of Linlithgow, where it terminated on the east.

The population of this county stands thus:

Population.

Parishes.	Population in 1755.	Population in 1790-8.	Persons. Males.	Females.	Occupations. Persons employed in agriculture.	Persons employed in trades, &c.	All other Persons.	Total of Persons
Arroquhar	466	379	226	244	23	76	371	470
Bonhill.....	901	2310	1160	1300	180	1280	1000	2460
Cardross.....	795	2194	1199	1350	222	611	1716	2549
Cumbernauld ..	2303	1600	856	939	370	212	1213	1795
Dunbarton.....	1480	2003	1125	1416	127	882	1532	2541
Kilmaronock ..	1193	820	443	436	353	40	486	879
Kilpatrick, New	1390	1700	694	710	535	816	62	1404
Ditto, Old..	2281	2452	1390	1454	710	2050	84	2844
Kirkintilloch ..	1696	2639	1477	1733	1315	1785	110	3210
Luss.....	978	917	459	494	405	127	421	953
Roseneath	521	394	303	329	297	29	306	632
Row.....	853	1000	464	506	96	44	830	970
Dunbarton jail.	—	—	—	5	—	—	—	3
Total	13857	18408	9796	10914	4633	7952	8131	20710

Language.

In the northern extremity of this county, in the parish of Arroquhar, and along the eastern coast of Loch-long, both the Gaelic and English languages are understood and spoken. In the most northern corner of the county a few of the old people understand the Gaelic better than the other; but the language of the more extensive, wealthy, and enlightened part of the island is here making rapid strides towards the extinction of that of the ancient Celts. All persons wish to have their children taught correctly the English tongue as it is spoken and written in the south of Scotland, because they are sensible of the advantages which it confers in the

Language. pursuit of fortune. The greater number of the people in the most northern corner of the county bear the name of M'Farlane. The chief of that clan formerly resided at Arroquhar; but the estate has passed, by purchase, to Mr Ferguson of Raith; and the spirit of clanship, of which we shall afterwards take notice, is necessarily broken.

STIRLINGSHIRE.

Boundaries and extent.

THE county of Stirling (anciently *Stryveling* or *Strive-ling*) is situated from 55° 56′ to 56° 16′ north latitude, and from 3° 30′ to 4° 14′ west longitude. It is bounded on the north by Perthshire, on the east by Linlithgowshire, on the south by the counties of Lanark and Dunbarton; which last also bounds it on the west. The greatest length from east to west is about forty-nine miles, and the greatest breadth from south to north twenty-three; but the medium in length may be forty-four and breadth sixteen miles. According to this calculation, it contains 704 square miles, being 450,560 acres English, or 358,336 Scottish acres, the only land-measure used in the county. The parish of Alva is not included in this description, because, although it belongs to Stirlingshire, it is entirely separated from it, and surrounded on all sides by the small county of Clackmannan. We shall, therefore, include it in our account of Clackmannanshire, excepting so far as concerns the statement of its population. This county occupies the centre of the country between the friths of Forth and Clyde, and therefore descends towards each of these streams, being highest in proportion to its distance from each. From the parishes of Kilsyth, Campsie, and Fintry, the waters descend both towards the east and the west, and near their source they interlock with each other; that is, the river Carron has its source considerably to the westward of the source of the Enrick, though the former runs to the Forth and the latter into Lochlomond, and from thence

Face of the country.

into the Clyde. The Lennox, Kirkintilloch, or Dunbartonshire hills, have been already mentioned as rising in the neighbourhood of Dunbarton, and that, proceeding towards the north-east, they advance through the centre of this county to the neighbourhood of Stirling. On the north of them is the fertile and beautiful valley of the Forth, which arises in the north-west corner of the county, near the upper or northern part of Lochlomond, among the confines of the Grampians. The western part of the valley of Forth, to the northward of the Lennox hills, runs into the valley of the river Enrick, which flows into Lochlomond. The centre and the southern part of the county consists of mountainous territory, intersected by the Carron, the Kelvin, and a variety of streams, with a large proportion of open country, and of rich valleys in different quarters. As the rivers run towards the east and the west, the open country does the same, and also the mountains and heaths. One extensive moor stretches from Sauchie, in the parish of St Ninians, to the Bellwell, in the parish of Balfron, a distance of about sixteen miles. It varies in breadth from one mile to four. Another moor extends from the vicinity of the village of Denny, on the east, to within a few miles of the town of Dunbarton, on the west. Its length is about thirty miles, and the breadth is about three miles. It is here and there intersected by narrow portions of arable territory. In the north-western part of the county, which includes Benlomond, is a space of uncultivated land of about ten miles in length and three in breadth. In the southern part also of the county, a district, consisting in general of peat-mosses and uncultivated moors, occupies a space, from Muiravenside to Cumbernauld, of about eight miles in length and two miles and a half in breadth. The

whole of these moors and mountains contain about 92,000 acres. Mountains.

The mountains of this county are either those in the neighbourhood of Lochlomond, of which Benlomond is the chief, or those which traverse the southern part of the county, through the parishes of Kilpatrick, Baldernock, Campsie, Kilsyth, and Denny. The northern ranges of these last are denominated the Lennox hills. The more southern branches receive their denomination from the parishes through which they pass, and are called Campsie fells, Kilsyth or Kilpatrick hills, &c.

Of the former division of mountains we have already mentioned Benlomond, together with its great and precipitous height. The view from the mountain is beyond conception grand and interesting. At the bottom is seen the beautiful lake, stretched out like a mirror; its islands having lost their rugged forms, and appearing as flat surfaces amid the bright expanse. The banks of the lake are seen ornamented with gentlemens seats and cultivated grounds. Looking towards the east, the rich plains of Lothian and Stirlingshire are distinctly spread out to the sight. Casting our eyes from thence to the south, and pursuing the view towards the west, the high grounds of Lanarkshire, the vales of Renfrewshire, with the Frith of Clyde, and the wide Atlantic, with its islands, are clearly discerned; while the Isle of Man, and the coast of Ireland, blended as it were with the sky, are scarcely discernible. But to one unaccustomed to highland scenery, the most striking view is undoubtedly on the north side, which may in truth be termed horribly or fearfully sublime. The eye, from where it first discerns the Ochil hills, near the east, ranging along the north till it comes near the western ocean, sees nothing but mountain upon mountain, elevating their summits in almost every variety Benlomond.

Mountains. of formation. In this stupendous range are to be seen Ben-Nevis, the highest hill in Britain, Benlawers, Benvorlich, and Cruachan, to the north; and to the south-west Goatfield, a high hill in the isle of Arran, and the Paps of Jura. There are also to be seen in the valleys between the mountains several lakes in Perthshire. Among these are Loch Catharine, Lochard, and Loch Monteith. The north side of the mountain is very steep. In one part is a dreadful precipice, already mentioned, more than 300 fathoms deep, and firm must be the nerves of him who can look down unmoved. This mountain in height is surpassed by Ben-Nevis, Benlawers, and some other mountains; but the difference is more than compensated by the elegance of its insulated situation with respect to the neighbouring hills, its form being that of a huge truncated cone, and its appearance, from whatever part it is viewed, much more noble and magnificent than that of the hills above mentioned. The lower parts of the mountain, on the side next the lake, are finely skirted with wood. In the summer months this mountain is visited by strangers from every quarter of the island, as well as foreigners, who come to view the romantic scenery of the Highlands. The month of September is in general accounted the best for ascending it, because, from the cool temperature of the air, the horizon is less clouded by vapours than during the more intense heats of summer. This mountain is entirely the property of the Duke of Montrose. Plovers abound near the middle of it, grouse above these, and near the top of the mountain ptarmigans are frequently seen. Among other rare plants the cloudberry (*rubus chamæmorus*) is found in great quantities on the south-east side of the mountain. Its blossoms are of a purplish white, and are succeeded by a bunch of red berries, which are ripe in July, and have a pleasant flavour. They are much

esteemed by many northern nations. The Laplanders bury them among the snow, and thus preserve them fresh from year to year. They eat them with the milk of the rein-deer. At the southern foot of the mountain, very near the Inn of Rowardennan, are to be found great quantities of *drosera rotundi-folia*, or round-leaved sundew, and *drosera angelica*, or great sundew. These plants catch flies by shutting up their leaves, and crushing them to death. In this they resemble the *dionæa muscipula*, or American fly-eater. At a great height on the mountain grows the *silene acaulis*, or moss catch-fly, the leaves of which form a beautiful green turf like a carpet, which is variegated with a fine purple flower, and grows in large patches. The *alchemilla alpinus*, or cinquefoil, ladies mantle, grows upon all the upper parts of the mountain. The *sibbaldia præcumbens*, or procumbent silver-weed, distinguished by its tridentate leaves, grows in great quantity even on the very summit. These remarks ought not to be considered by general readers as unimportant. By observing the plants upon which Nature has bestowed that hardiness of constitution which fits them for withstanding the severity of climate which must be encountered on the bleak sides and summit of Benlomond, intelligent men discover the means of covering with rich verdure the face of a rugged and barren country of inferior altitude. By observing whether any one of these alpine plants is grateful to sheep and cattle, and by transplanting them from their natural seats, the means are obtained of uniting profit with ornament, and of covering the face of nature, in every quarter, at once with fertility and beauty. Mountains.

Of the hills in the southern part of the county the highest ridge of those called the Campsie Fells, is about 1500 feet above the level of the sea, and about 1200 feet from the base of the ridge. The acclivity of the hills is very Campsie Fells.

Mountains. rapid; but they possess the appearance and character of the southern, not of the Highland mountains. Their surface is green, or covered with mossy pasture; and they do not rise aloft into abrupt and precipitous naked peaks. These mountains in the parish of Kilsyth do not rise above 1200 feet from the level of the valley, or 1368 above the sea. From the summit of the highest there is one of the most extensive, beautiful, and variegated views in Scotland. The first thing that arrests the attention is the amazing extent of prospect that opens all around. Part of at least fourteen, if not sixteen counties, or perhaps one-half of Scotland, is under the eye at one glance. Though not nearly so beautiful or variegated as that from the top of Benlomond, the view is richer and more extensive; for, being nearly at equal distances from the Atlantic and the German oceans, the whole extent of the island from east to west is viewed at once. Towards the south and north the prospect is still more extensive. At a moderate calculation, the area of the whole may be 12,000 miles. The striking contrast between the Highlands and the Lowlands is the next thing that attracts the attention. If the eye is turned southward from the Frith of Forth to Clyde, and from Pentland and Galloway to the Ochil and Kilpatrick hills, the whole seems one extended fertile plain. Nothing can possibly be a more striking contrast to this than the prospect to the north. For seventy or eighty miles it appears to be an endless succession of hill upon hill, overtopping one another till they are lost in the distance of the prospect, and blended with the blue clouds or azure sky. In a foggy day or frosty morning the prospect is truly picturesque. Being raised entirely above the fog, the whole plain to the south appears like the sea in a calm, while the hills

View from Kilsyth hills.

on the north seem to rise like islands out of the main, or like the tumultuous waves of the ocean in a storm. Waters.

Of the rivers in this county the Forth is the chief, and indeed, though not the largest, it has always been accounted the most distinguished of the Scottish rivers. It rises an inconsiderable rill from the north side of Benlomond, and flows to some distance within the north-west borders of Perthshire. Speedily the torrents, constantly pouring down from this corner of the Grampians, increase it to the size of a considerable burn or brook, which winds through the valley, and at times expands into the appearance of a lake. The Forth has this peculiar character, that from its source till it is lost in the estuary or frith which bears its name, its course is serpentine, or meanders in every variety of forms that a sportive imagination can conceive. Far above Stirling it proceeds along a level tract of an alluvial territory or delta land, which there is every reason to believe was in a former period an appendage of the ocean, but from which that element has been expelled in consequence of the gradual deposition of soil brought from the upper territory, here allowed slowly to subside, in consequence of the reaction of the tides, till it has gradually formed an extensive plain, consisting of what is in Scotland denominated carse lands. This river is navigable up to the town of Stirling for vessels of seventy tons burden; but from Stirling downward to Alloa, which in a direct line is only a distance of six miles, the windings of the river are so singularly intricate, and it takes such strange peninsulating sweeps, that the same distance by water is nearly twenty miles. At Alloa the river is one-half mile broad; at Stirling it is contained within the four arches of a bridge. Along the whole of this intricate channel the flux and reflux of the tide continually mix the soil with its waters, and stir up the mud, so that it is Forth.

Waters. an impure stream. It is of little use in navigation, because if vessels were to trust to their sails alone, they would be under the necessity of waiting for every wind round the compass, and that more than once or twice.

Carron. The river Carron rises in the centre of the county, and running eastward enters the Frith of Forth about three miles from Falkirk. In its whole length it is, as its name denotes, a winding stream, and "the bonny links of Carron water" are deservedly celebrated. At no great distance from its source it enters the Carron bog or meadow, and for upwards of three English miles it flows in a slow serpentine course over one of the finest and most fertile tracts of natural meadow that is perhaps to be seen in the island. This tract contains upwards of 1000 Scottish acres in one continued plain. In summer, from the adjoining heights, twenty or thirty different parties of people are to be seen employed upon it in hay-making; and during winter the river is industriously led over its whole extent to fertilize it for the ensuing crop. In both situations it affords a pleasing object, amidst the bleakness of the surrounding hilly country. Leaving the Carron bog, the river rushes over the Auchinlilie Lin or Spout, a tremendous cataract; after which it proceeds in a more quiet course, and is navigable to the village of Carron Shore. Like all the streams in this interesting district, its waters have been often stained with blood. In the poems of Ossian the banks of the Carron form the scene of hostility between the Romans and the independent tribes of the north. The ancient ballad of Gil Morice, the story of which has been formed into the celebrated tragedy of Douglas, represents the mother of the unfortunate young hero as having "lived on Carron side." In the lower part of its course, as well as in the upper district, the Carron frequently overflows the territory near its banks. Some of the low-lying lands

on the banks of the Forth are subjected to the overflowings of the river. A considerable farm, called *Boll-for-nought*, probably from its being gained from the Forth, is particularly subject to this inconvenience. The wall with which it is surrounded has sometimes been broken down by the weight of the water, and the greater part of the land overflowed. The Carron, throughout its whole course, is celebrated for the quantity, quality, and size of its trout. The endless variety of alternate pool and stream, and the openness of its banks, concur in rendering it the favourite retreat of the angler; insomuch that people of all ranks, and from a considerable distance, resort to it in the fishing season; and there is scarcely a shepherd or peasant on its banks who is not eminent in this art, and eager in the pursuit of it. It is said, however, that fish are not so abundant in this and other streams as formerly, in consequence, it is thought, of the use of lime as a manure, or of the cultivation of flax, which being steeped in the rills and rivulets, pollutes the streams, and renders them hurtful to trout and all other fish. As few or no proprietors reside near the upper part of the river, fishing becomes a common privilege; and drag-nets, or pock-nets, that is, nets in form of a bag, are often used, by which the larger fish are destroyed. Waters.

Bannockburn is more celebrated in history than important as a river, being only a small stream or burn, as its name implies. It belongs chiefly to the parish of St Ninian's, and rises either from the high lands in the north-west of that parish, or from a lake within it called *Loch Coulter*, which is about two miles in circumference, and abounds with perches and eels. Bannockburn, for what reason we know not, receives its name from the *panis ciceritius* of the Romans. Unleavened cakes, toasted in the Bannock-burn.

Watert. ashes, or upon an iron plate called a *girdle*, are named *bannocks* in Scotland.

Avon. A stream called *Avon* has its rise from some lakes in the south-eastern corner of this county and in the adjoining parish of Gumbernauld. It passes off to the eastward, and forms a part of the boundary between this county and Linlithgowshire.

Enrick. The river Enrick has its source in the parish of Fintry, and, as formerly mentioned, flows westward into Lochlomond. Rising from the hill of Fintry, it flows eastward to a short distance, and thereafter suddenly turns to the south, and after two miles, bending into the direction of due west, it rushes over what is called the *Leap of Fintry*; a cataract of ninety-one feet in height, over which the river suddenly pours its whole stream, forming in rainy weather, or after a thunder-shower, a waterfal of no mean magnificence. The river afterwards passes through the parish of Killearn, where it experiences another fall into what is called the *Pot of Gartness*. This is a deep pool, shaped like a cauldron or pot, into which the water falls over a rock that lies across the direction of the river. The fall is not perpendicular, but is interrupted by three or four breaks. This pot, which is well known, and is abundantly romantic, affords no small entertainment to the angler, as the salmon and trout from Lochlomond, being frequently unable to force their way to the summit of the fall, which requires two or three great leaps rapidly made in succession, are detained in the pot or pool below, and are often caught in numbers.

In the parish of Buchanan, adjoining to Lochlomond, this river flows in beautiful curves through the fertile haughs or flats of Buchanan, and the neighbouring parish of Kilmaronock in Dunbartonshire. When Lochlomond is full in winter, the river is apt to regorge to a

great extent upon the lower grounds, and, as it gradually flows off, enriches the soil; but when these floods occur in spring after the seed is sown, or in autumn before the corns are removed, they never fail to produce much mischief. Indeed, in a cold climate, lands thus situated are evidently better adapted for grass than for the plough. It is even said, that in autumn 1782, when these fields were covered by a flood of the river, there suddenly came an intense frost, which enabled men to walk on the ice above the standing corn. Waters.

In the upper part of its course, the Enrick receives the Blane, which gives its name to the parish called *Strathblane*, lying on the south side of the ridge which overlooks the Forth from the south, and is called the Lennox hills. The Blane rises from a very high hill, elevated above the rest of the range, with a conical top called the *Earl's Seat*: the river proceeds in a south-west direction for three miles, and thereafter is precipitated over several high falls. The most remarkable of these is the Spout of Ballagan, a cascade of seventy feet in height; after an additional course of eight miles, it loses itself in the Enrick. The long and narow sequestered vale of Strathblane has at times, in consequence of the near vicinity of the mountains, and of the heavy torrents, or rather water spouts, which suddenly burst among them, been exposed to much danger from inundations. It was long said by old persons, that upwards of seventy years ago, a water spout burst on the Earl's Seat, and poured such a torrent from the hill as threatened the inhabitants with unavoidable destruction. As the Blane falls into the valley at the summit of the country, where the land declines both towards the eastern and the western seas, a portion of the torrent was discharged eastward, and thus the valley of Strathblane was in some measure saved; but the magnitude of the inundation was The Blane.

Waters. always thought to have been exaggerated by fame, till the 13th of August 1795, when a similar torrent made its appearance. About eight o'clock of the evening of that day, the clouds, which during the afternoon had hung in threatening aspect around the skirts of the horizon, were condensed above the Earl's Seat. Here they burst and fell, as was evident from the effects, in entire sheets. The Spout of Ballagan appeared as an opening, whence the bowels of the mountain were issuing in water upon the plain; the torrent burst the banks of the river on each side, and discharged itself in nearly equal quantities to the east and west. That which run west tore up every thing before it. Corn-fields were laid waste; oats, barley, and potatoes, were destroyed to a great amount. Much damage was done to the bleach-fields below. It carried stones of three tons weight a considerable way into the open fields. At one place it forced a passage for itself along the public road, which it tore up like the channel of a river. In short, it presented such a scene of devastation as appears almost incredible. It is computed, that there was at least six times the quantity of water ever seen in the river during the greatest usual floods; and had it not been for the circumstance of a part being discharged to the east, it would have swept the houses situated on its banks before it. It lasted four hours; during which time the thunder and lightning were tremendous.

The Blane, and all the waters that fall into the Enrick, abound in trout, and also in salmon when that river is in flood, as the Enrick is a very favourite resort of the salmon; ascending the Leven from the Clyde, they pass through Lochlomond into the Enrick in great numbers.

Kelvin. The Kelvin, like the Enrick, descends from the summit of the country westward; but instead of proceeding to-

wards Lochlomond, its course is to the south-west, and it enters the Clyde at the village of Partick below Glasgow. The Kelvin rises near the centre of the parish of Kilsyth; in its whole course, both here and in the counties of Dunbarton and Lanark, it flows through extensive valleys, containing in its most valuable part a tract of about a mile and a quarter in breadth, and four miles in length. The river formerly flowed in a slow, oozing, serpentine course. The soil of the adjacent plain is a rich loam to the depth of five feet; but being flooded at least eight times in the year, and at all periods suffering from stagnating water, the crops were precarious, the grass was coarse, and in many places the soil was entirely overgrown with flags, rushes, and water lillies. Sir Archibald Edmonston, the proprietor on the north, offered to the proprietors of the south, who were numerous, to pay two-thirds of the expence of straightening the bed of the river, whereby it might be enabled to flow rapidly away. After many obstructions the plan was at last agreed to in 1792, and executed by Mr Robert Whitworth engineer. A canal, three miles in length, was cut for the river, with a fall of thirty feet in the whole space. The dimensions of the cut are various in proportion to the quantity of water it receives. For a mile at the top, where there is only a small river, it is only from eighteen to twenty feet wide at the surface by ten or twelve at the bottom; but as it receives new accessions of water, it was proportionally enlarged: so that the second mile it is twenty-two or twenty-four at the top by fourteen or sixteen at the bottom; and the lowest and remaining part of it is twenty-eight by sixteen or eighteen. Of course the whole cut is of a regular form, sloping gradually on each side, and happily proportioned to the quantity of water it is meant to discharge. The undertaker was paid from 2d. to 2¼d. each

Waters.

Water. cubic yard. The water runs off clear, and the cut is not even in the highest floods, above two-thirds filled with water; the land is completely drained, and preserved from inundations. The whole expence did not amount to L.600 Sterling.

Several streams run into the Kelvin in the upper part of its course. Among these is the Garrel Burn, which in a mile and a half falls over a multitude of cataracts, and descends nearly 1000 feet; but the principal part of its waters are now made to flow into a reservoir for the supply of the canal between Forth and Clyde. In the parish of Campsie is the Glassart, which descends from the Campsie Fells, and conveys the waters of a vast number of rivulets into the Kelvin. In rainy weather the summits of the mountains are here often covered with blue mist, when multitudes of torrents are seen rushing down their sides, as it were out of the cloud.

Additional to these are many burns and streams, which pour down from the higher grounds, and intersect the country in all directions. They have generally hollowed out for themselves deep furrows or glens on the sides of the hills; from which, after heavy rains, they rush down with dreadful impetuosity, carrying before them almost every obstruction in the way. Many of them in their course, falling over high precipices, exhibit not a few magnificent and romantic appearances, and all of them contain excellent trout.

Lakes. The county contains no lakes of importance, unless Lochlomond be considered as partially belonging to it. In the parish of Buchanan, near Lochlomond, there are three small lakes, Dulochan, Locharclet, and Lochamnancairn. The first of these contains pike, and the second pike and large trout. In the parish of Strathblane are six lakes, in the moorland part of the district; the largest of

them, however, does not exceed half a mile in length, and one quarter of a mile in breadth; but they serve to bestow a certain degree of liveliness upon a desolate region: they abound with pike, perch, and trout, and are frequented by wild ducks and other aquatic fowls. In the parish of Kilsyth the great reservoir for the canal between Forth and Clyde, though formed artificially, may well be considered as holding the place of a lake. It is perhaps one of the largest and most beautiful artificial sheets of water in the kingdom. It is of an oval form, fully three quarters of a mile long, somewhat less than half a mile in breadth, and covers upwards of seventy acres. The country around it is rugged and uneven, and gives the whole a romantic air. A few firs are planted at the east end and in an island near the west end of the lake. They thrive very well, and add variety and beauty to the whole. The expence of this work was very inconsiderable in comparison of the surface and quantity of water it contains. It was originally an extensive hollow, as if scooped out for the purpose by the hand of Nature. At one place only there was a deep opening about 100 feet wide at the bottom, and 200 yards at the top. By filling this up to the height of about 25 feet, the work was at once completed; and by leaving a sluice in the centre, it can be filled or emptied at pleasure. The whole is finished in a masterly and ingenious manner. This lake abounds with fish; and if it were not occasionally let out in the drought of summer to supply the great canal, it would furnish abundance of perch and trout at all times, and of the very best quality.

Lakes.

Great reservoir.

The climate of this county is various. Its western and south-western districts are exposed to frequent winds and heavy rains from the Atlantic ocean. In its north-western part, which encroaches upon the line of the Grampians,

Climate.

Climate. some of these mountains, and particularly Benlomond, penetrate so far into the upper regions of the air, that they necessarily experience much severity of climate, and are covered with snow during a considerable part of the year. The high country in the middle of the county, particularly the mountains called *Campsie Fells*, intercepting the clouds both from the east and the west, large quantities of rain fall there, and the weather is so changeable as considerably to retard vegetation. The town of Stirling, and the northern side of these mountains, with the plains which they shelter, experience a climate more dry and favourable. Its chief inconvenience is that which it encounters from the piercing and long-continued east wind, which sometimes prevails, from the centre to the eastern extremity of the island, from the middle of spring to the beginning of summer.

Soil. The soil of this county is extremely various, as ought naturally to be expected in a territory so much diversified by hills and dales. We have already mentioned, in general terms, some of these soils, particularly the extensive moors, the carse, and the meadow grounds. The soil in the western parishes generally contains a considerable portion of clay, that renders it cold, retentive of water, and productive of mosses and coarse grasses. The subsoil is mostly either a hard till, impenetrable by water, or an argillaceous kind of grit of a reddish colour, blotched and streaked with white, grey, and yellow. The *carse lands* constitute one of the most remarkable soils in the county. They lie in a low situation on the banks of the Forth, and extend from the river of Avon on the east to Kelly water on the west; a space of about thirty miles in length and two in breadth at an average. They are elevated from ten to twenty-five feet above high water mark, and a small portion of them is in some places overflowed

at times by the river. The soil is universally allowed to be the alluvion deposited by the Forth and its tributary streams, and consequently to be the spoils of the higher grounds, through which the river takes its course. It chiefly consists of a high-coloured clay, a small quantity of sand, and a pretty large mixture of once organized matter. In some places are patches of till of various colours, but not a stone so large as to obstruct the plough is to be found. The soil of the best quality, when dug first from the natural bed, is of a bright blue colour, and of a substance resembling the richest soap, and sometimes even serves as a substitute for fuller's earth. In many places the clay is excellently fitted for making bricks, tiles, and a coarse kind of stoneware. The depths are from five to fifty feet. The subsoils are various; as a stiff clay, hard till, and sea-shells in a natural state. These beds of shells are from a few inches to four yards in thickness; they are chiefly large oysters with a mixture of cockles, whilks, and some other shells at present found in the frith. Patches of rich and fertile loamy soils are interspersed in different parts of the shire. Light gravelly soils are chiefly on the banks of Enrick, Carron, Blane, and other waters in the western and midland parts of the county. The general rules concerning the soils are two: In the neighbourhood of rapid streams the valleys here, as elsewhere, are in general of a sharp gravelly character, and thus a clay soil often commences where the access of the water in time of floods ceases. In the next place, the same rule obtains here which we have remarked in Lanarkshire, that where the surface rests upon a bed of whin rock, the soil is fertile, sharp, soon penetrated by moisture, and easily dried; but, on the contrary, where the earth is full of valuable minerals, that is, where coal and freestone abound, the clay upon the surface accompanies

Soil.

Soil. them, producing a soil of a cold and retentive quality, and ill adapted to a wet climate. The high moors here, as in other places of Scotland, consist of a mossy soil, extremely loose when dry, but when wet retentive of moisture. Of the many peat mosses in this county, some have been formed upon the kerse or low grounds adjoining to the principal river, by the process which we described when treating of Dumfriesshire; that is to say, the Romans cut down the trees which formerly grew here, and formed the most formidable retreats of the natives. Where the moss is removed, these trees are still found lying in all directions beside their roots, which still continue firm in the ground in their natural position; and from impressions still visible, it is evident they have been cut with an axe, or some similar instrument. That they were cut down by the Romans is not only probable from the accounts which the historians of that people have given of their operations, but is confirmed by a circumstance that occurred in May 1768, when a large round vessel of thin brass, and curious workmanship, twenty-five inches in diameter and sixteen inches in height, was discovered upon the surface of the clay buried under the moss. This vessel, found upon the estate of John Ramsay, Esq. of Ochtertyre, was by that gentleman presented to the Antiquarian Society of Edinburgh, in whose museum it remains deposited for preservation; and in a list of the various donations presented to that society, published by them in 1782, it is denominated a *Roman camp-kettle*. The only mode for improving mosses upon the surface of the kerse lands is that introduced by the late Lord Kames, which consists of floating away the moss by means of a stream of water, whereby the inferior fertile soil is recovered and subjected to cultivation. The extensive moors of this and other countries are most obviously improved by means of

plantations, which, however, is a measure of considerable expence, on account of the necessity of enclosing the lands; and even the best enclosures are apt at times to prove insufficient for the security of the woods; because after heavy falls of snow, the sheep, by the aid of the drifted snow, are enabled to climb over the fences, and the hares also do considerable damage by destroying the skin of the young trees as high as they can reach; an injury which effectually prevents their farther growth. Agriculture.

The agriculture of this county is necessarily very various. In the parish of Gargunnock, and elsewhere upon the Carse or Kerse, all estates consist of moor, dry field, and kerse-farms. On the south is the moor or hilly tract, extending from Stirling to Dunbarton, and is only fit for sheep-pasture. The dry fields occupy the intermediate space between the hills or moor and the kerse-grounds; and upon these great improvements have of late been carried on. The carse-lands, which are all arable, are subdivided into farms from about 15 to 100 acres each; but from 30 to 40 are most common. Farms in the higher part of the county are from 20 to 1000 acres, of which there is commonly a mixture of rough wet land that is pastured only. Almost universally the farms are occupied by the persons who rent them. Small possessions, from two to 20 acres are to be met with in several parts, and in the old language of the country are still denominated *pendicles*. The occupiers of them are generally day-labourers, who gain their livelihood by working for the neighbouring farmers, or upon the high roads. Many of them are also in the possession of manufacturers or mechanics, for the accommodation of their families. Around the villages there are considerable numbers of small properties held in feu. Agriculture.

In the Kerse, wheat is usually preceded by summer-Crops.

Agriculture.

fallow; and much barley is reared, and is accounted superior to any other in the district. The cultivation of sown grasses is become very general. Peas and beans are little cultivated in the high parts of the county, but very generally in the Kerse as a mixed crop. The turnip husbandry is not extensively carried on, unless towards the eastern part of the county. In the Kerse lands the following rotation is generally preferred. 1. Summer-fallow; 2. Wheat; 3. Beans and pease; 4. Barley; 5. Hay; 6. Oats. It appears, from a memoir presented to the Board of Agriculture by William Wright, M. D. F. R. S. that potatoes were not planted out in the open field in this county, or perhaps any where else in Scotland, till about the year 1728, when Thomas Prentice, a day-labourer, first cultivated potatoes in the open field in the parish of Kilsyth. His example, owing to the success of his experiment, was soon followed by several of his neighbours; but little or none of the produce was for a while exposed to sale. His persevering exertions, aided by a laudable industry, enabled him to accumulate L. 200 Sterling, which he sunk for double interest. Upon this he subsisted till his death, which happened at Edinburgh in 1792. He lived to the advanced age of eighty-six. About twelve or sixteen years after potatoes were thus introduced, Mr Graham, who also lived in Kilsyth, cultivated them in great quantities for sale. This gentleman was among the first who supplied the market of Glasgow with potatoes. He was very successful; and his example, in raising the large, round, reddish-coloured potato in the open field, for the market, was soon followed by many farmers. The cultivation of the potato is now so universal that farmers plant them even in strong clay-land, though ill adapted for that crop. The utmost attention is paid to hoeing and cleaning the crop; and it is to be hoped that

the beneficial effects of this practice, applied to potatoes, will encourage husbandmen to extend it to other crops. In general, potatoes are planted in rows, and carefully horse or hand hoed and weeded. It is found that the crop is always best in quality, and most productive, on land where it has never been previously reared; but the potato, if repeated oftener than once in seven years on the same ground, is thought a scourging crop. Agriculture.

In this county, on some estates, the farm-buildings are substantial and well arranged. The best situation for the accommodation of the farm is generally chosen. Dwelling houses, on many estates, are two stories high, and are usually covered with slate or tile. Many of the houses in the Carse are of brick, well plastered and finished within. Foreign timber, when it can be got on reasonable terms, is always preferred. Fir, the growth of the country, is sometimes employed, but soon perishes, or requires frequent and considerable repairs. By the construction of the offices very little barn-room is allowed, the whole crop being stacked in the yard; a practice which generally prevails over all Scotland, and is attended with the best consequences. The corns are thereby kept more dry, and better conditioned, than when deposited in houses; less is destroyed by vermin when proper care is taken in building the stacks; and the great expence that necessarily attends the erection of capacious barns, and keeping them in repair, is avoided. Upon the greatest farms a *white* corn and a peas barn are to be found. Thrashing floors, for the most part, require much improvement. They are but too generally formed of clay only, and not of planks, of which every thrashing floor ought to consist, if the farmer expects to produce a clean sample of grain without the thrashing machine, which, however, is coming into very general use. In the best arranged farms the builds Farm-buildings.

Agriculture.

ings are so constructed as to surround the yard, where the cattle, well littered down, are foddered through the winter; a practice which produces the greatest quantity of manure. The yard is usually provided with a shade for cattle to go under in severe weather. The expence of the whole building, as convenience, not show, is principally intended, may rise from one to three years rent of the farm. The remains of the old buildings, especially in some places of the Carse, form a striking contrast with the neatness and convenience of houses erected in modern times. The old ones were in general formed of clay tempered with chopped straw. They were built upon a foundation of rough stones, and the timbers which supported the roof were carried down to the bottom of the clay-wall. When the most unremitting attention was not paid to the thatch, with which they were universally covered, the clay-wall rotted in a season, and thereby the landlord or tenant was put to continual expence for repairs. The materials of these old buildings form a valuable addition to the compost dunghill, the best use to which they are now put.

Enclosures.

About two-thirds of this county, exclusive of the moors, is supposed to be enclosed. All manner of fences, from high walls of stone and lime to neglected quickset-hedges, are to be seen. One proprietor, in the eastern part of the county, in the neighbourhood of Falkirk, has outstripped all others in the extent and rapidity of his improvements. In eight years he enclosed no less than 7000 Scottish acres. The fences are mostly of white thorn with double ditches, between which a mound or dike of earth is raised. The ditch next the hedge is commonly five feet wide at the top and three feet deep; the other is three feet wide. The dike or bank between them is four or five feet broad at the base, and as much in height above the surface of the ground. The lines of the enclosures are all straight,

and at right angles with one another, and many of them run on in the same direction without interruption for several miles. The ridges follow the straight course of the fences, for which the situation of the ground corresponds remarkably well. Several roads parallel to each other are drawn the whole length of the estate, and these are intersected at right angles by others. By these roads, which are of a sufficient width, free access is had to every field, there being only two fields between each road. The ground is naturally dry, except a very few small spots that are cut through by open drains, which may afterwards be covered. Large belts and clumps of trees are judiciously interspersed, both for shelter and ornament. The lands thus laid out were all improved by the proprietor himself, Mr Forbes of Callender. To accomplish suddenly so great an object, not only a great command of wealth was necessary, but considerable inconveniences were produced. It was necessary to dismiss the whole tenantry upon an arable estate extending to almost fourteen square miles, and to convert the whole, in the first instance, into grazing grounds in the hands of the proprietor; the whole old houses were at the same time pulled down. Thus a considerable popular outcry was produced, and a severe degree of odium was incurred, against the stranger who acted in the manner now mentioned. The termination of the whole, however, has been, that a large extent of country has been adorned and enriched, and rendered capable of producing probably four times the quantity of human food that it formerly did. Agriculture.

Wet ditches alone are in some parts of the Carse supposed to be sufficient fences, several of them being ten feet wide, and of a considerable depth. It is believed, that the extraordinary dimension of these excavations has

Agriculture.

been owing to a long-continued practice of procuring from them clay for various purposes, as house-buildings, brick-making, &c. Their sides and bottoms afford heavy crops of coarse grasses, as the *festuca fluitans*, *arundo phragmites*, &c. besides a considerable proportion of good grasses, as *poas*, &c. which, from the moisture of the ditches, grow with great luxuriance, and in the summer season are carefully cut with the scythe or sickle to be eat green, and in former times afforded the principal sustenance of the milch cows and young cattle on the farm.

Horses.

The best horses for draught are bought from the counties of Lanark and Air. They are fed in summer with clover, and in winter with oats, beans, hay, and potatoes, but chiefly with the straw of peas and beans. In a few places bruised shoots of furze have been used with success. Clover on the Carse lands rises thicker than on lighter soils, and the second cutting is often as heavy as the first; a third cutting is sometimes obtained. Farmers in this county universally look upon the introduction of clover, especially to be used in the stable as green food for horses, as one of the best modern improvements. The small farmers, till within these thirty years, gave their horses no other food in the summer season than thistles pulled from the growing corn, together with some coarse grasses cut with the sickle from the ditches and uncultivated patches of land. Many of them were allowed to range upon a bare piece of *nominal* grass, where no seeds had ever been sowed, and where the land had been wholly exhausted by repeated crops of oats.

Cattle.

Very few cattle are reared in the county. The inhabitants are well supplied by dealers, who, from the North and West Highlands, which are entirely breeding districts, and in the near neighbourhood, drive cattle of all

sorts and ages through every part of the country for at least three months in the year. In the upland parts of the county are several dairy farms, and the Airshire breed of cows is preferred. In the neighbourhood of towns and manufacturing villages, all the richest pastures are allotted to them. A considerable part of the moors of this county are pastured with sheep, almost universally of the black-faced kind, called here the *Linton breed*, from the name of the village in Tweeddale where the stock was originally purchased. The practice of pasturing with sheep Benlomond and other lofty tracts, has evidently, in the course of twenty-five years past, improved the quality of the herbage, so as to raise grass of a good species, and in very considerable abundance, where nothing formerly prevailed but bad kinds of grass, and these in no great plenty: the practice bids fair to banish heath from all these districts. An acre and a half of this upland pasture are required to make a wedder fat. It is likewise remarked, that the hills of Campsie, Fintry, and the neighbourhood, which have been pastured by sheep for almost half a century past, are much improved in the quality of the grass, and the heath is gradually disappearing.

Agriculture.

Sheep.

It appears from the valuation of lands, in the middle of the century before last, that Benlomond, with the whole of the upper part of the parish of Buchannan, was almost entirely stocked with goats. A considerable portion of the rents, in these days, consisted of kids and goat-milk cheese. Very few of that species of stock are now kept in the county.

In this county are many coppices that have been used as such past all memory. Torwood, in the parish of Dunnipace, and the Wood of Callender, in the parish of Falkirk, are generally believed to be the remains of the

Natural woods.

Agriculture.

Caledonian Forest, with which the greatest part of this country, when the Romans invaded Scotland, seems to have been covered. The trees are principally oak, beech, hazel, and birch. Some of the oaks, when allowed to remain, rise to a great size. Of this the county affords several examples. The most noted tree in the whole district was *Wallace's oak*, in the middle of the famous Torwood. This tree, which when entire measured twelve feet diameter, afforded in its trunk, hollowed by age, a seasonable shelter, in an hour of danger, to the hero whose name it bears, and a company of his brave attendants, when struggling for the independence of their country. A few small decaying fragments only are all the remains that are now to be seen of this venerable oak; and even these will soon be eradicated from the Torwood, as the virtuosi in several parts of the kingdom are picking them all up, and forming them into various devices, for the glorious memory of the ever-celebrated Wallace. Owing to the great advance in the price of oak during the last thirty years, the growth of the oak is more attended to than that of any other species of wood. The most careful proprietors of natural woods leave *standards* almost always of oak, which grow to be valuable trees, and do little injury to the coppices in which they grow. This practice seems to be gaining ground. Callender wood, consisting of about 250 acres, has for some time past been treated in such a way as to allow it to run wholly into large timber. The natural woods in the county may consist of 1350 acres. The value of many of them might be greatly increased by paying proper attention to the fences by which they are enclosed; not permitting, at any time, cattle or sheep to pasture in them; and by surface open drains to carry off the superfluous water, which at present lessens the value of that kind of property very much, especially where

the oak abounds. The alder (*betula alnus*) is the most unprofitable of all the trees which compose the coppices. It commonly succeeds best in lands that are moist. The willow seems to delight in the Carse lands, where it grows to a great size. Upon the whole, the oak, the ash, and the beech, are the trees most valuable in this county. Agriculture.

Great attention has been paid, especially during the last thirty-five years, to rearing timber of all kinds. Plantations for shelter, ornament, and profit, form a considerable part of the improvement of the many estates which have been enclosed and improved during that period. The most of improvers, thirty-five years ago, formed their belts of plantations for shelter by far too narrow. They were generally from fifteen to to thirty feet in breadth. It seems now to be an opinion universally received, that no belt of plantation for shelter, especially in the upland parts of the county, the whole of which is very much exposed to the violence of the south-west winds, ought to be less than from 60 to 120 feet broad. Several well-directed plantations in this way have been made by the Duke of Montrose, and likewise by Mr Ramsay on his estate of Sauchie, which borders on an extensive moor, not less than twenty miles long, stretching to the south-west. The ground covered with plantations, exclusive of hedge-rows, in the county, probably amounts to between 2000 and 3000 acres. The kinds of trees generally planted are oak, ash, and beech, with various pines, especially the larix, which at seven years old raises its head nearly double the height of any other tree of the pine kind. Plantations.

The north-western part of this county towards Loch-lomond is destitute of valuable minerals. The vicinity of the Grampians appears to cut off all the secondary strata, Minerals.

Minerals. particularly of coal, which abound in the hills of the south, which are more of a secondary magnitude. The Mineralogy of Benlomond. principal mountain, Benlomond, is chiefly composed of granite interspersed with great quantities of quartz. This last mineral is found near the top in immense masses, some of which must weigh several tons. These appear like patches of snow upon the mountain even when seen from Luss. Considerable quantities of micaceous schistus are found even at the top; and many rocks, towards the base of the mountain, are entirely composed of this mineral. The shores of Lochlomond are covered with rounded pebbles, composed chiefly of quartz, granite, and micaceous schistus, with some coarse red jasper, agreeable to the composition of the adjacent mountains, from which they have been washed by rivulets, and polished by the waves of the lake.

Fuel. In the north-western part of the county, upon the Endrick, and the upper part of the Forth, towards the centre of the county, peat is the ordinary fuel. The tract of mountainous territory which begins near Dunbarton, and extends in a north-eastern direction towards Stirling, appears to contain no coal in its northern part about Fintry and Strathblane; but the contrary is the case in its southern quarter, upon the Kelvin, and in the parishes of Campsie, Kilsyth, and towards the east, where this county approaches towards Lanarkshire, or is only divided from it by the long narrow strip of Dunbartonshire formerly mentioned.

Basaltic pillars. In different parts of the hills running from Dunbarton to Stirling, stupendous piles of basaltic rocks are found. In the parish of Fintry is a grand colonnade of basaltic pillars, which rise in a hill called *Dun* or *Down*, at the end of the hill of Fintry. The range consists of seventy columns in front, which are of a gigantic stature; some of these separating in loose blocks, others apparently

without joint from top to bottom. They stand perpendicular to the horizon, and rise to the height of fifty feet. Some of them are square, others pentagonal and hexagonal. A block separated from one of the hexagonal columns measured, by an accurate survey, as follows. Minerals.

	Feet.	Inc.		Feet.	Inc.
1st Side.....	2	1	5th Side.....	1	2
2d Ditto	1	8	6th Ditto.....	1	10½
3d Ditto	1	5½	Its greatest diameter	2	11
4th Ditto	1	3½	Its least ditto.....	2	3

On the east side of the range the columns stand separated one from another by an interstice of three or four inches. This interstice lessens gradually towards the west side till nothing but a seam is discernible, and then all is blended in one solid mass of rock, which is very much honeycombed, and has the appearance of having been ignited. The mountain above mentioned consists of very extensive beds of red ochre. In the parish of Strathblane, the front of a precipice, for the space of a furlong, is lined with stately columns of the same kind. They consist of four, five, and six sides, are from two to three feet in diameter, and thirty feet high. They rise from the horizon with a little inclination from the perpendicular; and some of them are apparently bent in a segment of a curved line. Among these hills the deep beds of the streams often display, in a remarkable manner, the mineralogical construction of the territory. In the last mentioned parish, at the water-fall called the Spout of Ballagan, a very remarkable section of the hill is presented. The side of it is cut perpendicularly by the water, and discovers no fewer than 192 alternate strata of earth and limestone. Near the bottom of the section are found several thin strata of alabaster of the purest white. There were also found near the same place, among the rubbish thrown up by the

Minerals. river in a late inundation, some fragments of antimony, which, when tried by a chemical process, turned out to be very rich specimens. The vein, however, whence these were torn, has not been discovered.

Strata of coal, lime, &c. at Campsie. In the parish of Campsie is abundance of coal and lime. The high ridge, however, called the Campsie Fells, contains no coal; though, in what are called the secondary hills, this mineral is very abundant. The lofty ridge, immediately after the coal terminates, is perceived, from the bed of the torrents, to be composed in the following manner: At the base of the hill, where the coal ceases, are several layers of that sort of lime, mixed with clay, called here *camstone*, which we described when treating of Dumbartonshire, and which is easily burned into a heavy lime, but must be slacked while hot. Immediately above the camstone are found at least a dozen strata of ironstone of excellent quality; the layers are of different degrees of thickness, with a soft slate intervening betwixt the layers. These different strata or seams occupy about 200 feet of the height of the mountain. Continuing to ascend, the summit of the mountains is composed of fifteen layers of rock, called here *moorstone*. In the inferior hills, about the Glassart, is a large field of coal on both sides of the stream, at the depth, on the north side, of from seven to fifteen fathoms, and on the south of nearly twenty-two fathoms. The coal is, at an average, from forty-two inches to four feet in thickness; it is covered by a bed of slate, above which is uniformly a limestone rock of four feet in thickness, above which is slate of seven or eight feet in thickness. Below the coal is a whiter sort of lime, thought inferior to that above. The coal here is said to be full of irregularities, called by the workmen coups, and hitches, and dikes. The surface of the country is extremely irregular; and the minerals

below ground appear to follow the rapid irregularities which occur upon the surface. The neighbouring parish of Baldernock, upon the Kelvin, contains likewise abundance of coal and limestone. The coal resembles that of Newcastle, caking together, and giving out a strong heat, when allowed to rest three or four hours before being stirred. Minerals.

In the parish of Kilsyth the valuable minerals are also very abundant. Ironstone was wrought there by the Carron Company upwards of thirty years ago at Banton, and still continues to be wrought. It consists, in general, of strata which are from four to fourteen inches in thickness. The neighbourhood of the canal renders them very valuable. There is also found, in the western part of the same parish, great quantities of the ball ironstones formerly described. Great beds of limestone, of various qualities, are also here found at a place called Westside. It has been wrought for some years by mining, and is burned in draw-kilns. The layer of limestone is seven or eight feet thick, and divided into square cubes by horizontal and perpendicular fissures; it is wrought to much advantage at a very moderate expence. It may be wrought for ages, for the mine seems inexhaustible; and it is nearly 700 feet above the level of the valley, and must therefore always be level-free. As it consists almost entirely of shells, it is of course of the best quality, and contains the greatest quantity of calcareous earth, and the least proportion of sand, of any lime perhaps in Scotland; therefore the demand for it is great. In various other quarters here lime has also been wrought. Freestone is likewise found in abundance, and at a place called the Garrel Glen, of a quality which is soft and easily wrought when first brought from the quarry, but becomes whiter and harder when exposed to the weather. At Kilsyth.

Minerals. The bed of freestone is generally from ten to fifteen feet, and lies upon a seam of coal about as many inches thick. There are a variety of stalks rising, from thin seams, like trees from the surface of the earth. Some of them are six, ten, or twenty feet long, in proportion to the depth of the freestone; and they differ as much in diameter as in length, being of all sizes from an inch to two feet. These are justly esteemed by philosophers objects of great curiosity, and they have furnished matter for much speculation; they resemble exceedingly a petrifaction, and yet the substance is not calcareous earth, but solid freestone of similar texture with the circumjacent rock. One of the largest of them is described as nearly sixteen inches in diameter, and six feet nine inches in length, of a compact solid mass; for the original stem, when entire, was upwards of twelve feet long; but the top, as is generally the case, was less solid, and mouldered down, or was easily broken, when exposed to the open air. In shape, colour, and appearance, it precisely resembles the trunk of a thorn-tree, insomuch that every stranger, at first view, supposed it to be one.

The coal in the neighbourhood has been wrought for ages, and is considered as inexhaustible, and is of various qualities. Some of it is brittle, and chiefly used for the furnace or smith's forge; other sorts burn clear, give a good heat, and cake, so that the very dross is valuable. In general, the strata of coal descend, or dip as it is called, to the south-east, unless when accidentally interrupted by what are called *bitches*.

Carron Works. In the south-eastern part of the county coal also abounds; and there, in the parish of Larbert, are situated the celebrated Carron Works, on the northern banks of the river of that name. The Company has a charter for employing a capital of L. 150,000, divided into 600

shares, and every holder of ten shares has a vote in the management. The Carron Iron Works were first projected and established by Dr Roebuck and Messrs Cadell and Garbet. They draw their materials, not only from the immediate neighbourhood, but from a considerable distance inland, or along the Forth. They have five blast furnaces for the manufacture of cast-iron from the ore or ironstone. They have also a great variety of furnaces without an artificial blast, in which cast-iron is melted, as at ordinary founderies, for the manufacture of different sorts of goods. They likewise convert cast or pig iron into malleable iron. The pig-iron is melted in a finery, where coke is used; while hot it is beaten out into plates about an inch in thickness. These plates are afterwards broken into pieces about two inches square, for the convenience of scouring them, &c; and they are then scoured in an iron cylinder which is connected with the water-wheel; and when they are properly prepared by this operation, they are put into pots, which are made of fire-clay, and in an air-furnace they are brought into a welding heat. In this state of preparation they are put under the hammer, and wrought into blooms; the blooms are heated in a chaffery or hollow fire, and then drawn into bars for various uses. The machinery is moved by the water of the river Carron; and for a supply in the time of drought, they have a reservoir to the extent of about thirty acres. But as this precaution is not enough in very dry seasons, they have moreover an engine for throwing back the water that it may be used again; and this engine raises four tons every stroke, and makes about seven strokes in a minute. If we take into the account, along with the people who are directly employed in the manufacture at Carron, those who are engaged in the mines and pits, together with those who carry materials

Minerals.

Minerals. to the works, and goods by sea and otherwise immediately from them, we may estimate the whole at 2000 persons. The Company is now understood to be very prosperous. Since the commencement of the war occasioned by the French revolution, the manufacture of iron in Scotland has proved extremely lucrative. It is certain, that at some iron-works a capital of eight or nine thousand pounds has produced between three and four thousand *per annum;* that is to say, where the soil was the property of the manufacturer. Previous to that period the returns were very moderate. Of late years, on account of the interruption or idleness occasioned among their workmen by gratuities from strangers, or for other reasons, admission is not easily obtained to visit the Carron Works. In former times the prohibitions only extended to Sundays. Burns, the Airshire poet, in one of his tours, not knowing, or not attending to this regulation, made an attempt to be admitted without meationing his name, but was refused by the porter. Upon returning to the inn at Carron, he wrote the following lines upon a pane of glass of the parlour into which he was shewn.

We cam na here to view your warks
In hopes to be mair wise;
But only, lest we gang to hell,
It may be na surprise.

But when we tirled at your door,
Your porter dought no bear us;
So may, should we to hell yet come,
Your billy Satan sair us.

Stirling. Stirling is the capital of this county. When viewed from a distance, it bears a great resemblance to the old town of Edinburgh, or what now constitutes the central ridge of that city. Stirling stands upon a hill which rises towards the west; the western extremity, as in

STERLING CASTLE

Edinburgh, is a precipitous rock, upon which stands the castle, and the principal street of the town proceeds along the ridge eastward; but the declivity is less gradual, and sooner comes to a termination than in Edinburgh. The principal and most conspicuous object in this town undoubtedly is its castle. None can tell the date at which either the town or the castle was built; but in all ages Stirling and Stirling Castle have been of the utmost importance in the history of Scotland: and from its Castlehill may be seen, at different distances, the scenes of the most sanguinary contests which have occurred in Scottish history. To recal these, independent of the name of Stirling, it is sufficient to mention Falkirk and Bannockburn. From the remotest ages, the common and easiest communication between the northern and southern parts of Scotland has been by the fords and bridges in its neighbourhood. Hence the possession of it has ever been reckoned of the greatest consequence by those who sought to be masters of Scotland. Buchannan mentions it again and again so early as the ninth century, but gives no description of it; and to throw any light upon this subject from the town's charters is impossible. The most ancient of these records is granted by Alexander the First, and is dated at Kincardine, the 18th of August, in the twelfth year of his reign; whereas there is reason to believe that Stirling had been incorporated long before, as the charter of Alexander is not a charter of erection, but only confers some additional privileges on the burghers and freemen. Alexander the First, who granted this charter, ascended the throne *anno* 1107, and reigned seventeen years. It therefore bears date in 1120. About the middle of the twelfth century, Stirling would appear to have become a place of royal residence. David the First kept his court at it, probably that he might be near to the abbey of Cambuskenneth, which he founded *anno* 1147,

Stirling.

History of Stirling.

Stirling. and on which he lavished many marks of his favour. Stirling Castle long continued to be the favourite residence of the Scottish monarchs, and still contains many remains of royal magnificence. The palace is now converted into barracks: its inside is totally without any form or regularity, but externally it is very richly and curiously ornamented with grotesque figures upon singular pillars or pedestals, each of which is supported on the back of a figure lying on its breast, which appears a very painful position, especially when encumbered with such a load; and some of the figures seem to wish to be freed from it, if we may judge by the contortions of the muscles of their faces.

About the middle of the ninth century, the Scots under Kenneth the Second, having expelled the Picts, and being desirous of obliterating every memorial of them, destroyed this castle; but it is said that Donald the Fifth, being taken prisoner by the Northumbrians, obtained his liberty by paying a large sum of money as a ransom, and yielding up all his dominions on the south side of the Forth to the Northumbrians, and those on the south side of the Clyde, with the town of Dunbarton, to the Cumbrians. The Northumbrians taking possession of the territory ceded to them, rebuilt the castle of Stirling and strongly garrisoned it. It continued about twenty years in the possession of the Northumbrian Saxons, but was afterwards, with the lands south of Forth, restored to the Scots, on condition they should assist the Northumbrians against the Danes.

Stirling Castle was in the tenth century the rendezvous of the troops of Kenneth the Third when invaded by the Danes, and from hence he marched to the battle of Luncarty. In the twelfth century this castle is spoken of in history as a place of great importance. In 1174 William the Lion having made an unsuccessful expedition into England, was taken prisoner, and detained twelve

months; after which he stipulated, for his ransom, to pay a large sum of money by a certain day; and as a security for the payment, delivered into the hands of the English the four principal fortresses of this kingdom, Stirling, Edinburgh, Roxburgh, and Berwick. Part of the money being unpaid, was remitted by King Richard the First, and the castles restored, on condition that William should contribute a sum of money to the crusade. Stirling Castle was occasionally the residence of the Scottish kings, but not a fixed palace, till the family of Stuart mounted the throne. Stirling.

James the Third was very fond of this palace, and made it the chief place of his residence. He built a large hall for the assembly of his nobles and parliament, which is still called the *Parliament-House:* this hall is 120 feet long, had a fine gallery, and was otherwise properly ornamented. It is now, however, stripped to the bare walls, and converted into a riding school. Adjoining to the Parliament-House is the chapel royal, which was erected by Pope Alexander the Sixth. It had considerable landed property, and was accounted the richest collegiate church in the kingdom. This chapel has undergone a similar reverse of fortune with the Parliament-House, being now converted into a store-room and armoury. This fortress was the place of nativity of James the Fourth. James the Fifth was crowned here, and the unfortunate Mary likewise underwent the same ceremony at this place, on the 4th of September 1543, in presence of the three estates of parliament, with great pomp and solemnity. From the time she assumed the reins of government till her captivity, this place is mentioned in almost every page of her history, either as the place of her retirement from the insults of her subjects, or from its being the place of confinement of her friends. Almost the whole Progress of the buildings.

Stirling. of the minority of James the Sixth, under his tutor the celebrated Buchannan, was spent here.

A strong battery was erected during the regency of Mary of Lorraine, about the year 1550, called the *French battery*. In the reign of Queen Anne the castle was repaired, enlarged, and a flanking battery, called *Queen Anne's battery*, was erected on the south side; since this time no alterations or repairs of any consequence have been made. The castle is commanded by a governor, deputy-governor, major, two lieutenants, and an ensign, and garrisoned by 100 men. Upon the rock, and near the castle, is a flat piece of ground enclosed, which was the place of the tournaments; on one side is a rock, whereon the ladies used to sit and observe the valour of the combatants; it is still called the *Ladies Rock*. On the south side of the castle is the park, enclosed by a stone wall; this, with several other pieces of ground round the garrison, form a jurisdiction called the *Constabulary of the Castle*. At the east end of the park was a royal garden; vestiges of the walks and parterres are still visible. In the garden is a mount of earth, in form of a table, called the *Knot*, where, according to tradition, the court sometimes held *fetes champetres*. Possibly this might be the round table mentioned by Barbour; if so, it was here that King James the Fourth used to amuse himself with the pastime called the *Knights of the round Table*, of which he is said to have been peculiarly fond. The lordship and castle of Stirling was the usual dowry of the queen of Scotland, at least after the accession of the Stuarts. On the north-west of the castle is a steep path leading to the town: this is called *Ballochgeich*. James the Fifth, who used often to travel through the country in disguise, for different purposes, when questioned who he was, always answered, "The goodman of

Ballochgeich." This road has been carried round the castle from the town, and in many places is cut out of the solid rock; it affords several beautiful views, and gives an excellent opportunity of examining the rock, which is in some degree basaltic. Stirling.

From the Castlehill of Stirling, the view towards the east, along the valley of the Forth, is magnificent and amusing. The windings of that river are too intricate to be beautiful, but the general prospect is nevertheless very pleasing, on account of the extent and fertility of the level valley which from this eminence is brought under the eye. The view on the north is bounded by the Ochil hills; and on the west is the rich vale of Monteith, bounded by rugged mountains, among which the summit of Benlomond is very conspicuous. We formerly said that the Carse here consists of alluvial territory; and on viewing here the rich plain on the level which is called the *Carse of Stirling*, every person must be struck with the idea that it has been formerly under water, and constituted a part of the estuary or frith of Forth; but the river has gradually embanked itself by the mud and sand which it has brought down from the mountains, and now meanders through the rich valley, contemplating its own workmanship. In proof of this, it may be observed, that some years ago a complete boat was found near Falkirk five fathoms deep in the clay; and anchors have been dug up in the ground between Stirling and Alloa. When to these circumstances are added the beds of oyster-shells found beneath the soil of the Carse, it does not appear that any doubt can exist upon the subject. View.

Several of the houses now standing in Stirling are undoubtedly of a very ancient date. *Marr's Work*, a large and awkward edifice, was begun by the earl of that name, *anno* 1570, while he was regent of Scotland, but never fi-

Stirling. nished. The tenement called *Argyle's Lodging* was built partly in the year 1637 by Alexander Viscount of Stirling. It was afterwards in possession of the family of Argyle, from whom it derived its present name.

The church The Greyfriars or Franciscan Church of Stirling, built by King James the Fifth in 1494, is a very handsome building, in the best stlye of what is called Gothic architecture. It is all of hewn stone, with an arched roof supported by two rows of pillars. It was originally one church, but since the reformation has been divided by a partition-wall, and at present makes two large and convenient places of worship, called the East and West Churches. A small addition to the east end of the building is said to have been made by Cardinal Beaton. This church is taken notice of in history as the place where, in 1543, the Earl of Arran, governor during the reign of Queen Mary, publicly renounced the reformed religion, which he had once professed to favour. It was also here that King James the Sixth was crowned in 1567. During the siege of the castle by General Monk in 1651, he raised his batteries in this churchyard. The steeple and roof of the church have many marks of bullets discharged by the garrison in their defence. Several shells were also fired at this church from the castle in the year 1746, when the rebels used to fire small arms from the steeple, and rang the bells, to testify their joy for the victory they had gained over the king's troops at Falkirk.

Abbey of Cambuskenneth. To the north-east of Stirling is a small village, called the *Abbey*, upon the north bank of the Forth, on the spot where the celebrated abbey of Cambuskenneth once stood. In ancient times its abbots were frequently denominated abbots of Stirling. As already mentioned, the monastery was founded by David the First in the year 1147, and filled with canons regular of the order of St Augustine, brought

Woollett del. Angus Sculp.

CAMBUS KENNETH ABBEY.

Stirlingshire.

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from Aroise, near Arras in the province of Artois in France. During the space of 200 years after its erection, this abbey was almost every year acquiring fresh additions of wealth and power by the donations of various noblemen, bishops, and barons, besides many rich oblations daily made by persons of every rank. Among other remarkable donations of fisheries, pasturages, &c. was one granted by the founder, King David, of half the skins and tallow of all the beasts slain for the king's use at Stirling. During the wars with England, in the reign of David Bruce, this monastery was pillaged of its most valuable furniture. To replace this loss, William Deladel, Bishop of Andrew's, made a grant to this community of the vicarage of Clackmannan. In 1559 the monastery was spoiled, and great part of the fabric cast down, by the reformers. Several of the monks embraced the reformation, but on that account had their portions prohibited by the queen regent. Mr David Panther was the last ecclesiastic who possessed this lucrative abbotship. During the commotions attending the reformation, church benefices were often seized on by those in power, without any lawful authority. John Earl of Marr, afterwards regent (according to Mr Nimmo), assumed the disposal of the revenues of this abbey, if he did not actually possess a considerable part of them; he had during the reign of James the Fifth been appointed commendator of Inch Mahone priory, which, together with that of Roseneath in Dunbartonshire, were dependent on Cambuskenneth. After the reformation had taken place, we find Adam Erskine, one of his nephews, commendator of Cambuskenneth. Moreover the earl himself carried off the stones of the fabric to build his own house, already mentioned, which is still called *Marr's Work*, in the town of Stirling. This abbey once consisted of extensive buildings; but nothing

Stirling.

Stirling.

of it at present remains, except a few broken walls, the bell tower, and staircase. No traces of the church exist.

Political constitution.

In this borough the town-council consists of twenty-one members, fourteen of whom are merchants or shopkeepers, and seven tradesmen, under the appellation of a provost, four bailies, a dean of guild, a treasurer, seven merchant-counsellors, and seven deacons of trades. By the old constitution of the borough, the old council in a great measure elected the new one; eleven members being changed yearly. Of the seven trades, six sent each a list of four individuals, and the bakers company sent a list of eight to the council, who had power to put a negative upon one-half of each list; the remainder of the council were chosen by their predecessors in office. In 1775 a majority of the town-council entered into a combination to preserve themselves and their friends perpetually in office; the courts of law thereupon declared the borough disfranchised, or that its elections must be illegal. In 1781 his majesty restored its privileges of election to the borough, by granting a warrant, as usual in such cases, that the first election should be made by a poll of the burgesses. Government at the same time seized this opportunity of rendering the government of the borough more popular for the future. By the new constitution, which is believed to have been framed by the lord advocate of Scotland for the time, now Lord Viscount Melville, the guildry company or merchants annually elect four members of the new council; the trades choose their seven representatives without sending lists; only the old council previously declares four of the old deacons incapable of being re-elected for the ensuing year; and there are still at least eleven of the old council changed yearly. By the new set, as well as the old, the provost, bailies, treasurer, and convener, cannot be conti-

mued in their office more than two years at a time. The dean of guild being now chosen by the company of merchants, is necessarily changed yearly. The trades incorporated by royal charter are the bakers, weavers, hammermen, skinners, butchers, tailors, and shoemakers. Several other sorts of tradesmen have been incorporated by charters, called *seals of cause*, from the town-council, but are not represented in that body. Their institution is of a late date. There is a remarkable bye-law of this community, made in 1695, which the members of council must annually take an oath to observe. By it they bind themselves to take no lease of any part of the public property under their management, nor to purchase any part of it; neither to receive any gratification out of the public funds, under pretence of a reward for their trouble in going about the affairs of the borough, or of the hospitals founded in it. By this bye-law, also, a *board of auditors* is elected annually for inspecting the public accounts, consisting of two members chosen by the merchants at large, and two chosen in like manner by the seven royal incorporations. Stirling.

There are several wealthy hospitals in Stirling, besides other extensive funds, for the relief of the poor, arising either from the funds of incorporations, voluntary subscriptions, or the collections at the church-doors: the consequence of which is, that the poor have multiplied greatly. It has even been said that every twelfth person in Stirling receives charity; yet the managers of the poors funds are believed to have at all times exerted a greater degree of circumspection and attention to that duty than is usual in most other places. The most ancient hospital is that endowed by Robert Spittal, tailor to King James the Fifth. The date of the foundation is not known, nor even of the sum granted by the founder; but Hospitals, &c. Spittal's charity.

Stirling. the commencement of the establishment is believed to have been about the year 1590. The funds were expended in the purchase of lands, which are now worth L. 300 *per annum*. The funds were destined for the support and relief of poor tradesmen, and a house was built for their reception at the foot of Mary's Wynd; but the money is expended in pensions. The original deed of foundation being lost, the managers have no rule but custom for the distribution of the funds.

Cowan's Hospital. Cowan's Hospital is next in point of antiquity. John Cowan, merchant in Stirling, in the year 1639, mortified L. 2222 Sterling for the support of twelve decayed guild-brethren. After Cowan's death a genteel house was erected for the reception of the persons for whom his charity was destined; but, what now seems surprising, nobody would consent to receive it: the pride of the decayed brethren of the Merchant Company of Stirling was such, that none of them would leave their own houses to retire into an hospital to be supported by public charity; for upwards of ninety years the house stood empty, and the funds were allowed to accumulate. With the accumulated funds lands were purchased, and, among others, those adjoining to Stirling which had belonged to the abbey of Cambuskenneth. The managers of the charity were the town-council and the senior clergyman of Stirling; and these persons became greatly embarrassed what to do with the funds entrusted to their care: they at length resolved to venture to alter the destination of the charity, and to distribute the annual revenue in pensions. It now amounts to nearly L. 1200 *per annum*, and by good management is increasing.

Allan's Hospital. Another hospital was founded by John Allan, writer in Stirling, in 1725. He granted the sum of 30,000 merks to the town-council and the junior clergyman, to be employed in the maintenance and education of the children

of decayed tradesmen. The money was laid out in the purchase of lands, which are worth L. 300 *per annum*. Boys are admitted to this hospital at seven years of age, and remain till they are fourteen. One of the conditions of Mr Allan's grant was, that charity should be given to any of his relations who might be in indigent circumstances; and this charity is regularly claimed by his kindred. Stirling.

Besides these charitable foundations, the Merchant Company have funds from which they defray the expence of educating and putting into business the children of poor guild-brethren. The kirk-session also expends considerable sums annually from the funds peculiarly entrusted to them. The kirk-sessions of the burgher seceders are equally liberal. The town's funds, and those of each particular incorporation, are also, in part, expended in a similar manner; and, after all, it is found necessary to have recourse to large voluntary subscriptions, to enable the magistrates to protect the town against the nuisance of begging poor. In short, so numerous are the poor in Stirling, and so ample the funds for their relief, that in description it seems to resemble a sort of great hospital. It affords a complete demonstration of the truth, that large funds for the relief of poverty never fail to generate poverty. In other towns, where no such funds exist, the poor are neither better nor worse supported than in Stirling, but they are fewer in number, because nobody looks forward to the certainty of receiving public charity, which is therefore considered as the last refuge of misery: whereas here numbers of persons come from the Highlands, and endeavour to obtain a settlement, from the expectation that they will ultimately be provided for. Other charitable funds.

The only jail in the county is at Stirling. In the council-house is a small vessel, called a *jug*, appointed by law

Stirling. to be the standard of dry measure in Scotland; and the firlot for barley, malt, and oats, ought to contain the cubical content of this jug thirty-one times. The firlot contains in all 2688¼ solid inches. The manner in which an old treasurer of the town of Stirling used to keep his accounts, when writing was a more rare accomplishment than at present, was sufficiently singular. He hung an old boot on each side of the chimney; into one of them he put all the money which he received, and into the other the receipts or vouchers for the money which he paid away, and he balanced his accounts at the end of the year by emptying his boots, and counting the money left in the one, and that paid away by the receipts in the other.

Whimsical mode of keeping accounts.

Seceders. There are two clergymen of the established church regularly settled in Stirling. It appears that formerly they had a third. This was the original seat of the secession from the church of Scotland, and of the sect called *seceders*, but who call themselves the *associate brethren*, or *associate synod*. Mr Ebenezer Erskine was settled third minister of Stirling in 1731; but in consequence of quarrelling with the rest of the clergy, he was deposed by the General Assembly in 1738. Upon this, Mr Erskine, and three of his brethren, Mr Wilson of Perth, Mr Alexander Moncrieff of Abernethy, and Mr James Fisher of Kinclaven, seceded from the church of Scotland, and stiled themselves the *associated brethren*. About the year 1744, some scruples were suggested to these brethren, then formed into a synod with others who had acceded to them, about the oath taken by burgesses on their admission to the freedom of their borough, by Mr Moncrieff, which in 1748 produced a schism among them. Previous to this schism they were extremely prosperous. The whole body of the common people in Scotland showed a decided attachment to them, and were rapidly enrolling themselves

in their communion. The middle classes of society were also acting in the same manner; and they enjoyed considerable favour from all those families of rank that were accounted most decidedly attached to presbyterian and whig principles, and to the succession of the house of Hanover; but this fatal schism broke their strength, by setting them in opposition to each other, distracted the minds of the public with regard to them, and arrested their progress to general ascendency. At the head of the associate synod remained Mr Ebenezer Erskine; and at the head of the other party, who called themselves *antiburghers*, appeared Mr Adam Gibb. Mr Gibb excommunicated Mr Erskine and his associates for taking an oath which seemed to condemn all seceders as schismatics. The clause objected to in the burgess-oath runs thus: "Here I protest, before God and your Lordship, that I profess and allow, with my heart, the true religion presently professed within this realm, and authorised by the laws thereof; I shall abide thereat and defend the same to my life's end, renouncing the Roman religion called *Papistry*." This was the form of the burgess-oath used at Perth. It is by no means similar in all the boroughs; and in some of them no mention whatever is made of religion. This, in particular, was the case in Stirling; where, as the interest of the secession has always been powerful, a clause was introduced in favour of the antiburghers. The oath was in these terms: "I swear to be a faithful burgess of the borough of Stirling, to obey the magistrates thereof, and town-officers having their lawful commands." The additional clause follows: "*In matters purely civil, so far as agreeable to the word of God.*" Notwithstanding the great degree in which the seceders were weakened by their mutual dissensions, and the victory which the established clergy consequently ob- Stirling.

Stirling. tained over them, they are still of no small importance in the country. Those denominated the Anti-Burgher Synod have in Scotland 135 congregations, divided into three synods, of Edinburgh, Perth, and Glasgow; and each synod subdivided into three presbyteries; besides two additional presbyteries of Elgin and Aberdeen, which act in subordination, not to any particular synod, but to the general assembly or synod of the whole. In Ireland they have also a synod, consisting of twenty-five congregations, divided into four presbyteries. In North America they have, in the state of Pensylvania, eleven congregations; in Nova Scotia three congregations; and in Kentucky three.

What is denominated the Burgher Associate Synod has in Scotland 127 congregations, which are divided into nine presbyteries. In Ireland they have a synod, consisting of forty-three congregations, divided into four presbyteries. There has of late been a schism in the burgher associate synod. The Confession of Faith of the church of Scotland, which was framed by the celebrated assembly of divines at Westminster during the civil wars, is subscribed by all the clergy of the church of Scotland, and by all the clergy among the seceders, on their admission to office, as a test of the purity of their faith. It contains a clause which declares that civil magistrates have power to suppress heresy. This clause has of late years alarmed the consciences of the burgher associate clergy, because under it they apprehended themselves to be self-condemned, or that the civil magistrate might suppress their meetings as schismatical or heretical. They think, on the contrary, that the civil magistrate has no right to interfere with the consciences of men, and have therefore resolved to expunge the offending passage from the Confession of Faith. Twelve or thirteen of their clergy, however, not included in the number already mentioned,

have wished to retain the Confession of Faith unaltered, and these have formed themselves into a new associate presbytery; they are called the adherents of the *old light*, in opposition to the majority of their brethren, whom they term *new light* men. Stirling.

As far back as the end of the sixteenth century, shalloons were manufactured in Stirling to a considerable extent, but the trade afterwards declined, although it is still in some degree carried on. During the decline of the shalloon manufactory, that of tartans started up; but after the year 1760, also passed away. Carpet-manufactories have for many years been carried on with considerable success; and the cotton-manufactory has also been here introduced by companies connected with Glasgow. And here, as in almost every town of any consequence in Scotland, the business of banking is carried on to a considerable extent. There is here a valuable salmon-fishery upon the Forth, which forms a part of the revenue of the incorporation of Stirling. Manufactures.

Stirling has long been celebrated for its grammar-school, which has sent into the world a number of celebrated men; and this place can boast of giving birth to some who have made a considerable figure in the literary world. Among these we may mention Dr Robert Pollock, who was the first principal of the university of Edinburgh, and a very celebrated writer of his age; Dr Henry, author of the History of Britain; and Dr Moore, well known as the author of Zeluco and several other excellent works.

The next place of importance in this county is the village of Falkirk. It is situated on an eminence above the Carse, with a declivity on every side. It is on the north road between Edinburgh and Glasgow, nearly at an equal distance from each, and within eleven miles of Stir- Villages. Falkirk.

Villages. ling. It consists of one principal street, running from east to west, which is paved. It has also a few short lanes. The country around it, especially towards the north-east, is extremely fertile and well cultivated. From the north side of the town the prospect is extremely delightful, comprehending a well-cultivated district, extending to a square of nearly twelve or fourteen miles. The view is bounded by the Ochil hills, and elevated lands in the counties of Stirling, Fife, and Linlithgow; to the north-west the summits of the Grampians are seen. A part of the Frith of Forth, and the vessels passing on the canal within a mile of Falkirk, augment, in no small degree, the beauty of the scene. When this prospect is involved in the darkness of night, the flashes of light from the iron-works at Carron appear in awful and sublime majesty. When a fall of snow or rain is soon to happen, the light is refracted by the thick and moist atmosphere, and a considerable illumination appears in the air above the works. These are seen at a considerable distance; and great flashes of light are thrown into the houses in the neighbourhood, which have windows towards the Carron works.

Falkirk is said to have been formerly a borough of regality, but no vestiges exist of any jurisdiction, excepting that of the baron-bailie, whose civil jurisdiction extends only to L. 2 Sterling, and his criminal jurisdiction to the power of imposing a fine to the amount of twenty shillings, or setting delinquents in the stocks for four hours in the day-time. This town is chiefly remarkable on

Falkirk tryst. account of its great fairs. The greatest market for cattle in the island is held at Falkirk three times a-year, in August, September, and October. They are commonly called the *trysts* of Falkirk, and have been frequented for upwards of a century and a half. The fair in

October is the greatest. From 30,000 to 50,000 head of cattle are then usually shewn in the course of a week. Many of them are brought from the remotest parts of the Highlands and islands, as well as from the low country. The distillers and farmers in Scotland generally trust to the Falkirk September and October fairs for the purchase of half-fat cattle, the feeding of which they complete in the course of winter. The value of pasture-grass in the vicinity of this market is greatly enhanced, owing to a competition amongst the drovers to take fields, especially those that are well fenced, where they deposit their cattle a few days before the market, and if purchasers do not appear they keep them on the field some time longer. If it should happen that the cattle are not sold, which indeed is seldom the case, they are afterwards driven southward at the risk of their owners. It is believed that the additional value derived to the pastures within one mile of the place where the market is held, may amount to at least one-fourth of the rent. A small tax is paid to the owner of the moor on which the cattle stand during the fair. The quality of the soil, though naturally poor, is evidently improving by the cattle standing on it; and though the present ground has not been so occupied above twenty years, one now sees fine grass rising plentifully, where nothing but heath and barrenness formerly prevailed. At these fairs are likewise sold a considerable number of sheep, with which a part of the Highlands is now stocked. The sale, both of cattle and sheep, has of late years been on the increase. Numbers of small Highland horses are also brought here for sale. Villages.

The extensive trade carried on through the great canal, which terminates in this neighbourhood, suggested to the late Sir Lawrence Dundas the propriety of building a

Villages. village and quay near the east end of it on his own estate. The place which he fixed on for this purpose was the angle which is formed by the junction of the river Carron and the canal. They were begun to be built in the year 1777. The village is now of considerable extent, and is called Grangemouth. Vessels bring into this port timber and hemp, deals, flax, and iron, from the Baltic, Norway, and Sweden; and grain from foreign markets, as well as from the coasts of Scotland and England. The trade to London is carried on by the Carron Shipping Company, who in their vessels convey to that place goods which are made at Carron, together with other articles of commerce; and when they return, they bring grocery goods, dye-stuffs, &c. for the supply of Glasgow, Paisley, Greenock, Falkirk, Stirling, and many of the inland towns of the west country. It is believed that goods are imported and exported annually at this harbour to the amount of upwards of 4000 tons.

Grangemouth.

Other villages. There are also a considerable number of populous villages in this county, chiefly in the eastern part of it, as St Ninian's, Upper and Lower Bannockburn, Balfron, Carron Shore, Camelon, Airth, Bainsford, &c. Falkirk and Kilsyth are, however, the only market-towns; although this last, considered as a village, is of no great importance. Campsie and Fintry are villages situated to the south, or in the centre of the country, considered as extending from the eastern to the western sea. Campsie consists of two villages. The one most lately built was occasioned by the introduction of the cotton manufacture. Indeed the manufactures of Glasgow have extended themselves into various quarters of the western part of the county; and in the eastern parts, the operations of the Carron Company, together with the trade passing through the canal, have introduced a powerful spirit of

commercial activity. There is also in this quarter, at Denny, a considerable cotton manufacture, and also print-fields and bleachfields. Antiquities.

The antiquities of this county might form the subject of a great volume, and we cannot propose here to do them justice; this county, or its immediate vicinity to the south, having been the scene of a very great proportion of the most important events which have occurred in the history of Scotland. It was here, as already mentioned, across the neck of land which in this quarter forms a continuation of the island, that the Romans erected their celebrated barrier; and it is here, also, that at a later period an attempt has been successfully made, in some degree, to divide the island, by enabling ships to pass from the eastern to the western waters. Here, also, the most important pitched battles were fought in the memorable contest which the Scots successfully maintained for their independence; and here they suffered the severest defeats, and also ultimately obtained that victory which in a great measure terminated the contest. As this county is upon the verge of the Grampians, or mouth of the Highlands, it was the scene of many contests between the inhabitants of these two divisions of Scotland, and was longer exposed to the acts of plunder, and the state of insecurity, which accompanied the feudal aristocracy, than any other part of Scotland to the south of the Forth. Antiquities.

Beginning at the north-western part of the county, it may be observed, that Benlomond, and the adjoining lands along the eastern shore of Lochlomond, were formerly the property of the celebrated freebooter, or Scottish Robin Hood, called Rob Roy M'Gregor.

The name of this Highland freebooter is familiar to every inhabitant of this part of the country; and his exploits, consisting of intrepid acts of depredation, are still Rob Roy.

Antiquities. related with wonder. From the accounts given of him, he appears to have possessed that sort of generosity which is often ascribed to the chiefs of banditti; that is, he plundered the rich, but was generous to the poor; and he was hospitable and faithful to those who trusted him. His name became so terrible, that the whole neighbouring country to the south-east was under the necessity of submitting to pay him tribute for forbearance and protection.

Black mail. This was denominated *black mail*. He appears to have attained to such a degree of power, by the terror of his name, that he claimed the tribute stipulated for his protection as a debt justly due. The following copy of an order of the justices of the peace, met in quarter-sessions at Stirling, a little after the middle of the seventeenth century, will shew the manner in which he held the country under contribution. It is taken *verbatim* from the original manuscript, sent at that time to be published at the kirk of Strathblane.

"At Stirling, in ane quarter-session held by the justices of his Highness's peace, upon the 3d day of February 1658-9, the Laird of Teuch being chosen chairman:

"Upon reading of ane petition given in be Captaine M'Gregor, makand mention that several heritors and inhabitants of the paroches of Campsie, Dennie, Baldernock, Strathblane, Killearn, Gargunnock, and others, within the sheriffdom of Stirling, did agree with him to oversee and preserve thair houses, goods, and geer, frae oppressioun, and accordinglie did pay him; and now that some persones delay to mack payment according to agriement and use of payment; Thairfore it is ordered, that all heritors and inhabitants of the paroches aforesaid mack payment to the said Captaine M'Gregor of thair proportiounes for his said service till the first of February last

past, without delay. All constables in the several pa- Antiquities.
roches are hereby commandit to see this order put in executionne, as they sall answer the contrair. It is also hereby declared, that all who have been engagit in payment sal be liberat after such tyme that they goe to Captaine M'Gregor, and declare to him that they are not to expect any service frae him, or he to expect any payment frae them. Just copie, extracted be

"JAMES STIRLING, Clk of the Peace."

"For Archibald Edmonstaine, Bailzie of Duntreath, to be published at the kirk of Strathblain."

In 1691, this chieftain, then called *Old Rob Roy*, came down with his followers, and invaded the parish of Kippen. He pretended he had a commission from King James to plunder the rebel whigs. The inhabitants fled; and those freebootters carried off the whole cattle, and as much grain and furniture as they could carry along with them. This act of depredation was long known by the name of the *herrysbip of Kippen*.

The descendants or kindred of this redoutable *protector* of the low country long continued their occupation. One of his successors, in the early part of the late century, bore the name of *Rob Roy*. This, like the names of Cæsar or Ptolemy in ancient history, seems to have become a sort of designation, or honourable title, of the chieftain of the branch of the clan of M'Gregor who inhabited the frontier of the Highlands. This Rob Roy was proprietor of an estate called Craigrostan. It happened that he and one M'Donald borrowed a considerable sum of money from their neighbour, the Duke of Montrose, for the purchase of cattle, the whole, or greatest part, of which M'Donald got possession of and fled. When the money became due Rob Roy was unable to pay it; in consequence of

Antiquities. which the Duke seized on the lands of Craigrostan, and settled other tenants upon the farms. Rob Roy being thus driven from the inheritance of his forefathers, vowed revenge. He caused a report to be spread that he was gone to Ireland, but retired to a cave on the edge of the lake at the foot of Benlomond, several miles above Rowardennan, where he lived with a party of trusty young fellows, most of them his tenants or vassals, and who were therefore warmly attached to him, and interested in his motives of revenge. Here he waited for a proper opportunity of executing the vengeance he had vowed. The time arrived when the duke's factor came to collect his master's rents. Rob Roy being informed of this, went with his party to Chapel Leroch, where the factor lodged, and forced him to deliver the money, for which he gave him a formal receipt.

After committing this robbery, which was in the year 1716, he went into Argyleshire, where he was patronized by the Duke of Argyle. On hearing this, the Duke of Montrose remonstrated with his Grace of Argyle, who sent for Rob Roy, and requested him to leave the country. He thereupon desired the duke to inform Montrose, that though he, the Duke of Argyle, gave him a lodging, his Grace of Montrose fed him. In fact, he continually sent out parties of his followers, who took corn, meal, and cattle from the duke and his tenants, whom he laid under regular contributions, requiring them to pay what was called *black mail* for the security of their property. The following anecdote is likewise related of him. One of the duke's tenants being unable to pay his rent, the factor had ordered his cattle to be seized. Rob Roy, hearing this, sent him money to pay his rent, but waylaid the factor, took it from him, and afterwards presented it to the poor man.

In the Statistical Account of the parish of Campsie, it is said that the father of the present minister of that parish paid *black mail* to M'Gregor, in order to prevent depredations being made upon his property; M'Gregor engaging, upon his part, to secure him from suffering by any *hardship*, as it was termed; and he faithfully fulfilled the contract, engaging to pay for all sheep which were carried away, if above the number seven, which he styled *lifting*; if below seven, he only considered it as a *picking*. And, for the honour of this warden of the Highland March, Mr John Lapslie having got fifteen sheep lifted in the commencement of the year 1745, M'Gregor actually had taken measures to have their value restored, when the rebellion broke out, and put an end to any further payment of *black mail*, and likewise to Mr M'Gregor's self-created wardenship of the Highland borders. Antiquities.

This last M'Gregor, who acted as protector of the country bordering on the Highlands, appears to have assumed, in all writings, the name of Graham, on account of the legal prohibition then existing to use the name of M'Gregor. One of his original contracts is still said to be in existence; whereby he engages to protect a certain number of persons on condition of their paying to him *4 per cent.* of the annual value of their lands.

In Craigrostan, in the parish of Buchannan, are several of the caves in which the followers of Rob Roy, when powerfully attacked, were accustomed either to lie in ambush, or to conceal themselves for safety. They are known by the names of the most remarkable persons who used to frequent them. There is one commonly known by the name of *King Robert's Cave*. What gave it that name was, that King Robert Bruce, after his defeat at Dalrie, in the west end of Strathfillan, passed that day, Caves.

Antiquities. with very few with him, down the strath, crossed the water of Falloch, and came down the north side of Loch-lomond to Craigrostan. Night coming on when he arrived at this cave, he slept there. Next day he came to the Laird of Buchannan, who conducted him to the Earl of Lennox, by whom he was preserved for some time, till he got to a place of safety.

George Buchannan's birth-place. The parish of Kilearn is distinguished as the birth-place of George Buchannan, the celebrated poet and historian. That great man, whose name is deservedly famous thro' Europe, was born at a place called the *Moss*, a small farm-house on the banks of the water of Blane, and about two miles from the village of Kilearn. The farm was the property of George Buchannan's father, and was for a long time possessed by the name of Buchannan. It is now the property of Mr Finlay of Moss, and holds of the family of Drummikill, from which George Buchannan's ancestors descended. The place is called the *Moss*, because it is situated in the vicinity of a peat-moss, which is part of the farm. The dwelling-house, considered as a building, is very far from being conspicuous, although it is no worse, and probably never was worse, than the ordinary farm-houses in this part of the country. Its appearance of meanness arises from its being very low and covered with straw-thatch. Part of it, however, has been rebuilt since the year 1506, when George was born. Mr Finlay is highly to be commended for preserving, as much as possible, the ancient construction and appearance of this far-famed and much-honoured house. The most superb edifice would sink into oblivion when compared with the humble birth-place of George Buchannan. George Buchannan's family had been reduced by the extravagance of his grandfather to indigence. His mother's brother, George Herriot, sent him to Paris for his education; but in less than two years, the death of his uncle, and his own

History of Buchannan.

bad state of health, obliged him to return home. He Antiquities.
then became a soldier under John Duke of Albany; and the severity of the campaign brought on a disease which confined him to his bed during the whole of the next winter. While struggling with poverty and sickness, he was at the age of twenty years admitted into the college of St Barbe in Paris, where he taught grammar for three years, and became acquainted with the Earl of Cassillis, who was so delighted with his wit and manners, that he made him his companion and tutor. With him he remained five years abroad and two years at home; at the end of which the Earl died, and he was about to return to France, when King James the Fifth made him preceptor to his illegitimate son, who was afterwards the famous Regent Murray. While he was in this situation there was a conspiracy against the king, who, believing the Franciscans to be concerned in it, ordered Buchannan to write against them; he did so, but in such gentle terms that the king was dissatisfied, and commanded him to write with more severity. The second order produced the celebrated Franciscanus, of which only one copy was given to the king, who let other persons see it, and it would seem in a dishonourable manner; for it soon became public, and Buchannan found the animosity of the church more powerful than the favour of the crown. Cardinal Beaton offered a sum of money for his head; and the persecution of him became a common cause, not only to mendicants, but to ecclesiastics of every kind. He was imprisoned, and would have been tried had he not escaped from his keepers. When he arrived in Paris, he found Beaton there as an ambassador to that court. This induced him to quit the city immediately for Bourdeaux, where he taught in the public schools for three years. Beaton found him

Antiquities. out, and would have had him tried in France, if the affair in Scotland had not put an end to his embassy.

From Bourdeaux, after inspecting the education of the celebrated Montaigne, he went to Paris, and taught the second class in the college of Bourbon. In the year 1547 he went to Portugal, in order to teach philosophy and polite learning; and he says that he did so, because his companions were rather familiar friends than strangers, and because that corner of the world appeared to him the most likely to be free from tumults. He was happy in that country for some time; but when his friend Goveanus died, he was imprisoned, first in the inquisition, and afterwards in a monastery. The first charge against him was, that he had written the Franciscanus; the second, that he had eaten flesh in Lent; and the third, that he had no good opinion of the Romish religion. To the first he answered, that before he left France he had sent an account of that affair to the king of Portugal, and that he had given but one copy of that poem to the king of Scotland, by whose order it was written. His own words are, "Unum enim ejus exemplum regi Scotorum, qui scribendi auctor fuerat erat datum." At last he obtained his liberty, and was made tutor to the son of Marshal Brisac, with whom he spent five years in France and Italy. He returned to Scotland in the same year that protestantism became the established religion of that country. He was made principal of St Leonard's college in St Andrew's, and was elected moderator of the general assembly of the church; an office of great importance at that time, and which has never been conferred upon a layman but in that instance only. He was appointed preceptor to the young king by the authority of parliament. He was one of the commissioners to York, and afterwards to Hampton Court, upon the affairs of Queen Mary; and at

his return he was made director of chancery and pensioner of the cross-regal in Airshire. Honours were heaped upon him, even after the death of his great friend the Regent Murray; for he was made one of the lords of council, and lord privy seal. He retired from court about a year before his death, and died a bachelor in December 1582, in the seventy-sixth year of his age. Antiquities.

As Buchannan lived and acted during the tempestuous period of European history occasioned by the revolution from popery, when party zeal run high, his character has been much attacked, though evidently with little justice. The only circumstance which has not been well explained is, how he fell into such poverty that he was buried at the expence of the city of Edinburgh. The offices which he held in Scotland during the latter part of his life were lucrative; we cannot therefore see how he became so indigent, but by supposing that he gave away his money in charity. This seems the more probable; because in all the calumnies that were thrown out against him, he is not so much as charged with extravagance; because prodigality is seldom the vice of old age; and because, when he was near his end, he desired his servant to give to the poor what little money was in his purse, as there was not enough to defray the expences of his funeral, saying, "If they will not bury my corpse, they may let it lie where I am, or they may throw it where they please." Buchannan's character.

Whether Buchannan is considered as a poet or historian, his talents are uncommonly splendid, though, on account of the language in which he wrote, they cannot now be generally popular. The Franciscanus is a nervous, correct, and elegant satire; his Jephtes and Baptistes possess much of the ancient simplicity of style, while his small poems contain much epigrammatic point. In his paraphrase of the Psalms of David are a great multitude of

Antiquities. elevated and sublime passages; and on the whole, the style of the ancient Latin poets is correctly imitated: but the subject seems an unfortunate one: no poet has successfully translated many of these Jewish hymns, and even Buchannan has found it necessary to run into an extreme degree of verbosity, and a repetition of the same phraseology, which renders them tedious and uninteresting. As a historian, Buchannan undoubtedly contains many inaccuracies; but these appear to have been the result of his possessing less evidence than has since been recovered, or because in his own time the rage of faction was so violent that it was seldom possible to know the truth, and a historian had not in that age the aid of a multiplicity of printed documents daily published, which, with regard to public events, give modern historians an advantage never formerly possessed. Of Buchannan's history, "The style," says Le Clerc, "is beautiful and pure, and he appears everywhere to speak the truth as far as it was known to him. His judgment of things is sound; he censures freely what deserves it, and commends what he thought worthy of praise. He unites the brevity of Sallust with the elegance and perspicuity of Livy; but he is not sufficiently exact in his dates, and does not cite his authorities." Thuanus says of him, "That though Buchannan, according to the genius of his nation, sometimes inveighs against crowned heads with severity, yet that his history is written with so much purity, spirit, and judgment, that it does not appear to be the production of a man who had past his days in the dust of a school, but of one who had been always conversant in the most important affairs of state. Such," says he, "was the greatness of his mind, and the felicity of his genius, that the meanness of his fortune did not hinder him from

forming just sentiments concerning things of the greatest moment." Antiquities.

More than 200 years after Buchannan's death, a number of gentlemen in the neighbourhood of the place of his nativity resolved to erect a monument to his memory. It was at first intended to have been placed at the head of Buchannan Street in Glasgow; but a spot nearer his birthplace was afterwards preferred. Buchannan's monument is situated in the village of Kilearn, and commands an extensive prospect. It is a well-proportioned obelisk, 19 feet square at the basis, and reaching to the height of 103 feet above the ground. In the middle is a cavity of six feet square at the bottom, gradually diminishing until it reaches the height of 54 feet, where it becomes so narrow as to receive the end of a Norway pole, which is continued to the top of the obelisk. To this pole the machinery for raising up the materials for building was fixed. Owing to this peculiar mode of construction, the monument is believed to be much stronger than if it were solid. The foundation was laid in the month of June 1788 by the Reverend James Graham, minister of the parish. In the foundation-stone was deposited a *crystal bottle*, hermetically sealed, containing a silver medal, on which was engraved the following inscription: Monument.

In Memoriam
GEORGII BUCHANNANI,
Poetæ et Historici celeberrimi,
Accolis hujus loci, ultra conferentibus,
Hæc Columna posita est 1788.
Jacobus Craio, Architect. Edinburgen.

This beautiful structure is built of a white millstone grit, found a little above the village of Kilearn. The quarry from which it was taken has been wrought for a long time past, and is very extensive. It was known by the name of the

Antiquities. Lettre Hill Quarry, from the name of the ground; afterwards it was called the Millstone Quarry, because millstones were frequently taken from it; then the House of Montrose Quarry, because it afforded stones for the Duke of Montrose's house at Buchanan; now it is called the Monument Quarry.

This part of the country, adjoining to Lochlomond on the south, has been very fruitful in distinguished men. Residence of Napier of Merchieston. Near the Pot of Gartness, formerly described, and the ancient mill of that name, are the remains of an old house, in which the celebrated John Napier, inventor of the logarithms, passed much of his time, or had his country residence. This eminent mathematician was the eldest son of Napier of Merchieston, and born in the year 1550. Having at an early period displayed great natural parts, his father took care to have them cultivated by a liberal education. After going through the ordinary courses of philosophy at the university at St Andrew's, he made the tour of France, Italy, and Germany. Upon his return to his native country, his literature and other fine accomplishments soon rendered him conspicuous, and might have raised him to the highest offices in the state; but declining all civil employments, and the bustle of the court, he retired from the world to pursue literary researches, in which he made an uncommon progress, so as to have favoured mankind with some most valuable discoveries. He applied himself chiefly to the study of mathematics. He also appears to have been drawn into the vortex of religious speculation, which filled the minds of men at that period. He wrote a book upon the Revelation, in which, by dint of profound calculation, he fixed the period when the day of judgment was to take place, and demonstrated that the Pope was Antichrist. It is unnecessary to say

that his prediction concerning the day of judgment proved fallacious. The work alluded to has been printed abroad in several languages, and particularly in French at Rochelle, in the year 1693, octavo, announced in the title as revised by himself. Nothing, says Lord Buchan, could be more agreeable to the Rochellers, or to the Hugonots of France, at this time, than the author's annunciation of the Pope as Antichrist, which in this book he has endeavoured to set forth with much zeal and erudition. Antiquities.

But what has principally rendered his name famous was his great and fortunate discovery or invention of logarithms, by which the ease and expedition in calculation have so wonderfully assisted the science of astronomy, and the arts of practical geometry and navigation. This work he appears to have begun about the year 1593. When Napier had communicated to Mr Henry Briggs, mathematical professor in Gresham college, his wonderful canon for the logarithms, that learned professor set himself to apply the rules in his *Imitatio Napeirea;* and in a letter to Archbishop Usher, in the year 1615, he writes thus: "Napier, Baron of Merchieston, hath set my head and hands at work with his new and admirable logarithms. I hope to see him this summer, if it please God, for I never saw a book which pleased me better and made me more wonder." The following passage from the life of Lilly the astrologer is quoted by Lord Buchan, as giving a picturesque view of the meeting betwixt Briggs and the inventor of the logarithms, at Merchieston near Edinburgh. "I will acquaint you (says Lilly) with one memorable story related unto me by John Marr, an excellent mathematician and geometrician, whom I conceive you remember. He was servant to King James the First and Charles the First when Merchieston first published his logarithms. Mr Briggs, then reader of the Discovery of the logarithms.

Antiquities. astronomy lectures at Gresham college in London, was so much surprised with admiration of them, that he could have no quietness in himself until that he had seen that noble person whose only invention they were. He acquainted John Marr therewith, who went into Scotland before Mr Briggs, purposely to be there when these two so learned persons should meet. Mr Briggs appoints a certain day when to meet at Edinburgh; but failing thereof, Merchieston was fearful he would not come. It happened one day, as John Marr and the Baron Napier were speaking of Mr Briggs, 'Ah, John (says Merchieston), 'Mr Briggs will not come;' at the very instant one knocks at the gate. John Marr hasted down; and it proved to be Mr Briggs to his great contentment. He brings Mr Briggs up to the baron's chamber, where almost one quarter of an hour was spent, each beholding the other with admiration before one word was spoken. At last Mr Briggs began: 'Sir, I have undertaken this long journey purposely to see your person, and to know by what engine of wit or ingenuity you came first to think of this most excellent help into astronomy, viz. the logarithms; but, Sir, being by you found out, I wonder nobody else found it out before, when now, being known, it appears so easy.' He was nobly entertained by Baron Napier; and every summer after that, during the laird's being alive, this venerable man, Mr Briggs, went purposely to Scotland to visit him." Kepler dedicated his *Ephemerides* to Napier, which were published in the year 1617: and it appears, from many passages in his letters about this time, that he held Napier to be the greatest man of his age in the particular department to which he applied his abilities. And indeed, as Lord Buchan remarks, if we consider that Napier's discovery was not, like those of Kepler or of Newton's, connected with any analogies or coin-

cidences which might have led him to it, but the fruit of unassisted reason and science, we shall be vindicated in placing him in one of the highest niches in the Temple of Fame. Antiquities.

Napier was twice married. By his first wife, who was a daughter of Sir James Stirling of Keir, he had only one son, named Archibald, who succeeded to his estate. By his second wife, a daughter of Sir James Chisholm of Crommlix, he had a numerous family. At his country residence Napier appears to have devoted himself entirely to study. He frequently, in the evening, walked abroad in his nightgown and cap. When perplexed by his mathematical speculations, the clack of the mill, which only went at such times as the miller had employment, often distressed him so much that he desired the miller to stop the mill. The constant noise of the water-fall gave him no disturbance. These, and some other peculiarities, attracted the notice of the common people, who could not comprehend the nature of his employment; but they at length found out the whole mystery. It was discovered that he was a warlock, in compact with Satan, and that he was busy studying the black art. A less distinguished student might have found this suspicion very dangerous, because the practice of burning witches came in his days to be in full vigour.

Along the course of the Forth, every house of importance appears anciently to have been a sort of fortress for the protection of the inhabitants against the inroads of their neighbours from the mountains; but of these ancient fortresses few vestige remain, the materials having been carried off to be converted into modern buildings. On several small heights in this neighbourhood are the remains of ancient circular fortifications, evidently similar to those which we formerly mentioned as abounding Old fortifications.

Antiquities. in the more southern counties, and which we consider as having been constructed for places of retreat to men and cattle against sudden inroads. In this quarter the name of Keir is usually applied to such works, such as Keirhill of Glenterran, Keirhill of Dasher, Keirbrae of Dram, Keirknow of Arnmore, and Keirbrae of Garden. On the summit of each of these heights is a level spot, usually of a round or oval figure, surrounded with a rampart, which in most of them remains perfectly visible. The circumference of the rampart on the Keirhill of Dasher, which is of a middle size, does not exceed 190 yards. It has been suggested by antiquarians, that the words Keir, Caer, Chester, Castra, are of similar import, and that the name is equivalent to that of fortification in general. The term Peel, which is used in this neighbourhood, seems to have been applied to more regular buildings intended for defence. Thus, the Peel of Garden is less elevated in point of situation, and rises little above the Carse; but the enclosure is considerably larger than that of the Keirs, and the rampart and ditch have suffered less from the injuries of time. We read, in the old history of Sir William Wallace, of the Peel of Gargowno (Gargunnock), in which an English party was stationed to watch the passage of the Forth at the Frew in its neighbourhood. Wallace, with a few followers, took the fort by assault in the night, when the English were off their guard. The inquisitive stranger may still be conducted to the spot which it occupied, and will perhaps regret that scarcely a stone of it is now left. The remains of the bridge where Wallace crossed the Forth are still to be seen about a quarter of a mile westward of the Peel.

The rich log. In the parish of Strathblane, a singular story is told of a log of wood. About fifty years ago, it is remembered to have served as a prop to the end of a bench in a school-

house near the church. Afterwards it was used as a plaything by children, who amused themselves with carrying it to the top of a declivity, whence it rolled to the bottom. It then lay many years on the wall of the church-yard. At last it was approriated by a crazy old woman, a pauper, who lived in a hut by herself. She used it for a seat for about a dozen of years. After her death, one of her neighbours was employed to wash the clothes that were found in her house. As fuel was scarce, the log was laid upon the fire to heat the water requisite for the operation. As the log did not readily kindle, the washer-woman took it from the fire, and proceeded to cleave it with a hatchet, when, lo! at the first stroke, the log burst asunder, and the floor was covered with money. This happened about the year 1792. The coins consisted of crowns, half-crowns, and shillings, of Queen Elizabeth, James the First of England, and Charles the First. A few gold coins were also found. The value of the whole is supposed to have been about L. 40 Sterling. The log was about a foot and a half square. It had been excavated through a small triangular opening cut in one of its sides. After the treasure had been deposited, the hole had been neatly closed up with a piece of wood fitted to the place, and fixed with wooden pegs. The washer-woman who burst the log being alone, secured the money, and wished to conceal it; but her husband, a worthless fellow, got hold of it, and decamped with the whole amount, excepting a few pieces which he had previously sold, leaving his wife to support five children as she best could. Antiquities

In the parish of Baldernock is the singular structure called the *Auld Wife's Lift*. It is situated nearly a mile north from the church on very high ground. It Auld Wife's Lift.

Antiquities. consists of three large stones. Two of them are laid along upon the earth close by each other; and upon the top of these the third is placed in the same direction with their ends pointing south and north. The two undermost are of a prismatical shape; but the uppermost seems to have been a regular parallelopiped, and still approaches that figure as nearly as may be supposed, making allowance for the depredations of time. It is about eighteen feet in length by eleven in breadth and seven in depth. It is placed nearly parallel with the horizon, but inclining a little to the north; the upper surface is pretty level. Neither of the two supporters appears to be so large as the stone they sustain; but their just dimensions cannot be easily ascertained, as their bases are sunk a considerable number of feet in the earth. Owing to their prismatical shape, there is a triangular opening between them and the upper stone. It is about three feet in depth, but somewhat wider. Through this opening, superstition says, every stranger who visits this place for the first time must creep, otherwise he shall die childless. The stones are of a greyish-coloured grit. They were taken from the rocks in the neighbourhood. They stand in a circular plain of about 250 yards in diameter, and surrounded with rising ground, forming a kind of amphitheatre. The sacred grove hath long ago yielded to the all-subduing hand of time, yet not without leaving behind traces sufficient to convince us of its existence. The plain is of a deep mossy soil. Roots and stumps of oak-trees yet remain in their natural position; and some of them exhibit evident marks that they have been exposed to fire. The traditional account of the present name of this monument is, that three old women having laid a wager which of them would carry the greatest burden, brought

in their aprons the three stones of which it is constructed, and laid them in the position in which they are now found. This tradition probably originated from the druidesses, who might at this place superintend the sacred rites; and whose age, singularity, and more than ordinary sagacity, made them to be looked upon by the ignorant and grossly superstitious vulgar of these times as being possessed of a supernatural power. Altars, nearly of a similar construction, have been met with in several places of Britain. This monument, which strikes with surprise every beholder, owes its preservation more to the nature of the place where it is situated than to any other circumstance. It is, however, to be hoped that its proprietor will take care to preserve from ruin this venerable relic of the most remote antiquity. It is worthy of remark, that a druidical stone in Ireland, mentioned by Cambden, is called the *Lifted Stone*; and there are some in Poitiers in France known by the appellation of *Pierres Levées*. We also know, from the authority of Tacitus and Mela, that aged female druids lived together in sisterhoods, in sequestered spots, devoting their time to the peculiar offices of their worship. Antiquities.

Not far from the Auld Wife's Lift, but not within sight of it, are two large cairns of an elliptical shape. The largest, which is sixty yards in length, and ten in breadth, is now almost carried away. Through the whole length of it were two rows of broad stones set on edge on the ground, at the distance of about four feet from each other. Between these rows the dead were buried, having flag-stones laid over them. The heap raised above them was mostly of pretty large stones quarried from the adjoining rock. The other cairn was laid open some years ago; and, though not so large as the other, was of the same construction, which seems to be Danish. Some of Cairns.

Antiquities. the stones, placed in rows at the bottom, are considerably large. Among the contents, upon opening, were found fragments of human bones and urns. One of the fragments of an urn is ornamented near the mouth with two shallow grooves. The diameter of the circle, of which it is a segment, seems to have been at least twenty inches. This *tumulus*, owing to frequent dilapidations, will soon be annihilated. Tradition says there was a battle in the neighbourhood between the Scots and Danes, and that among the latter a person of a distinguished character was slain.

Roman barrier. The southern part of this county runs along the northern front of the Roman wall. It is not probable, however, as some antiquarians have supposed, that the immediate vicinity of the wall was the scene of very steady hostility between the Romans and the ancient Scots. The very circumstance of the Romans having been able deliberately to form such a rampart, implies that they were masters of the country; and as they had permanent stations along the course of the wall, it is not likely that their troops would be insulted immediately under the walls of their garrisons. But there is another reason, formerly noticed, of a more powerful nature, resulting from the form of the country, which must have prevented the ground immediately beyond the wall from being the scene of much hostility. We have already said, that the security of this Roman barrier depended more upon the almost impassable swamp formed on its northern side, than upon the breadth of its ditch, or the height of its dike: and even at this day, it would be no difficult matter to lay a large portion of the valley there under water: and many places, from the name of Inch (island), which to this day they retain, must evidently have been once surrounded with water. It is probable that the morass, though in-

capable of being passed on foot, was at the same time unfit for navigation, so that the wall could not be approached with boats. The Roman barrier, therefore, could only be attacked at its extremities; for the natives found it easier to pass over the friths of Forth and Clyde than to cross the swamp opposite to Graham's Dike, with the certainty of meeting resistance under most unfavourable circumstances if they should accomplish the passage. In the district, however, around Campsie and Kilsyth, beyond the wall, are many of those circular fortifications which are probably the work of a later age than that of the Romans. In the parish of Kilsyth are several which bear a close resemblance to each other. They are in general about forty or fifty yards in diameter. The outer wall or enclosure, for some of them have evident marks of smaller but irregular inclosures within, consists of a rude mass of large or small smooth stones, built without any regularity or order, and without mortar of any kind. In times of ignorance and barbarism, they may, however, have been places of considerable strength. In this same parish is one of those artificial mounts, many of which we have frequently noticed. It stands in an angle, formed by two small rills, near a farm called Castletown, or Bald Castle. It rises regularly on all sides, at an angle of forty-five degrees, but on the north is only twenty feet perpendicular; whereas on the south it is double that height. It has been surrounded by a ditch which might easily be filled by water. At the base it is nearly 100 yards diameter; whereas at the summit it is scarcely fifty. The summit is flat, as the natural ascent of the ground supplies what is wanting in the artificial mound. Its top is often cultivated, and produces excellent crops; but its sides are covered with brushwood. Many cairns have also existed in the same neigh- Antiquities

Antiquities. bourhood; but the stones of most of them have been removed—those of a large size for building enclosures, and the smaller ones to from the public roads; all of them contained urns, stone-coffins, &c. demonstrating that they were sepulchral.

Human body preserved. But the most singular piece of antiquity, though not of a remote nature, is that of which the minister of the parish of Kilsyth has given an account, both in the Statistical Account of Scotland, and in the Tour through the Highlands by J. Garnet, M. D. In this last work it is in the following terms: "There is an arched vault or burying ground, under the church of Kilsyth, which seems to have been the burial-place of the family of Kilsyth for many generations. As the estate was forfeited, and the title became extinct in the year 1715, it has never been used for that purpose since that period. The earl fled with his lady and family to Flanders; and though he returned more than once *incognito*, in the habit of a common beggar, and as such lodged with several of his tenants, yet it is certain he was not buried at Kilsyth. The tradition is, and it is said to be confirmed by some papers and letters lately found, that he and a number of the unfortunate noblesse who had been concerned in the rebellion were either murdered or killed by a sudden accident in Holland about the year 1717.

"At all events, it seems certain that his lady with her infant son were smothered by the falling in of the roof of the room, in which a number of the nobility who had been concerned in the rebellion were assembled. It is generally said and believed that this was not by accident but design; that the landlord and some of his accomplices had cut the beams which supported the roof; and that, upon a signal being given, he let it fall in, with a view to smother the whole company. It appears that very few

escaped; and I never heard it doubted or denied that Lady Kilsyth and her infant perished in the ruins. Indeed, the wound she received on the right temple is still visible; and when the body was first discovered it was covered with a black patch about the size of a crown-piece. There is no mark of violence on her son: he seems to have been smothered, as it is generally said, sitting on the knee of his mother at table. Her body was embowelled and embalmed, and soon afterwards sent over to Scotland. It was landed and lay at Leith for some time in a cellar, and was afterwards carried to Kilsyth, and buried in great pomp according to the form of the church of England. It is not twenty years since some of the inhabitants of this parish died who were in their youth eye-witnesses of the funeral. The body was enclosed first in a coffin of fir, next in a leaden coffin. The space between the two was filled with a white matter somewhat of the colour and consistence of putty, apparently composed of gum and perfumes, for it had a rich and delicious flavour. When I was a boy at school, I have frequently seen the coffin in which she lies, for the vault was then always accessible, and often opened; but at that time the wooden coffin was entire. Indeed it was only within a few years that it decayed. Even after this the lead one remained entire for a considerable time; but being very brittle and thin, it also began to moulder away; a slight touch of the finger penetrated any part of it. In the apertures thus made nothing was seen but the gummy matter above mentioned. When this was partly removed, which is easily done, being very soft, and only about an inch in thickness, another wooden coffin appeared, which seemed quite clean and fresh; but no one ever thought of opening it till the spring 1796, when some rude regardless young men went to visit the tomb, and with sacrilegious hands

Antiquities.

Antiquities. tore open the leaden coffin. To their surprise they found under the lead a covering of fir, as clean and fresh as if it had been made the day before. The cover of this being loose was easily removed. With astonishment and consternation they saw the body of Lady Kilsyth and her child as perfect as the hour they were entombed. For some weeks this circumstance was kept secret; but at last it began to be whispered in several companies, and soon excited great and general curiosity. On the 12th of June, while I was from home, great crowds assembled, and would not be denied admission. At all hours of the night, as well as the day, they afterwards persisted in gratifying their curiosity. I saw the body soon after the coffin was opened; it was quite entire. Every feature and every limb was as full, nay the very shroud was as clear and fresh, and the colours of the ribbon as bright, as the day they were lodged in the tomb. What rendered this scene more striking, and truly interesting, was, that the body of her son and only child, the natural heir of the title and estates of Kilsyth, lay at her knee. His features were as composed as if he had been only asleep. His colour was as fresh, and his flesh as plump and full, as in the perfect glow of health: the smile of infancy and innocence sat on his lips. His shroud was not only entire, but perfectly clean, without a particle of dust upon it. He seems to have been only a few months old. The body of Lady Kilsyth was equally well preserved; and at a little distance, with the feeble light of a taper, it would not have been easy to distinguish whether she was dead or alive. The features, nay the very expression of her countenance, were marked and distinct; and it was only in a certain light that you could distinguish any thing like the ghastly and agonizing traits of a violent death. Not a single fold of her shroud was discomposed, nor a single member

impaired. But no description can give a just or adequate idea of the neatness or elegance of her appearance." I therefore refer to the sketch taken by your friend. I have only to lament that his representation was finished chiefly from my description, as at the time you saw the body it was much sullied, and the shroud injured; but it is as near the original as I can recollect, or as any pencil can express. I can only say that it is not a flattering portrait. Antiquities

"Let the candid reader survey this sketch; let him recal to mind the tragic tale that it unfolds, and say, if he can, that it does not arrest the attention, and interest the heart. For my part, it excited in my mind a thousand melancholy reflections; and I could not but regret that such rudeness had been offered to the ashes of the dead, as to expose them thus to the public view. The body seemed to have been preserved in some liquid, nearly of the colour and appearance of brandy. The whole coffin seemed to have been full of it, and all its contents saturated with it. The body had assumed somewhat the same tinge; but this served only to give it a fresher look. It had none of the ghastly livid hue of death, but rather a copper complexion. It would, I believe, have been difficult for a chemist to ascertain the nature of this liquid. Though perfectly transparent, it had lost all its pungent qualities, its taste being quite vapid. I have heard, however, that several medical gentlemen carried off small phials full of it, but do not know whether they made any experiments with it. The rich odoriferous flavour continued, not only in the vault, but even in the church, for many weeks, as can be attested by many hundreds; all agreed that it was a mixture of perfumes, but of what kind it was not easy to say: the most prevalent seemed to me to be that of spirit of turpentine; and it is certain that this odour continued the longest. The

Antiquities. head reclined on a pillow; and as the covering decayed, it was found to contain a collection of strong-scented herbs. Balm, sage, and mint, were easily distinguished; and it was the opinion of many that the body was filled with the same. Although the bodies were thus entire at first, I confess I expected to see them crumble into dust; especially as they were exposed to the open air, and the fine aromatic fluid had evaporated; and it seems surprising that they did not. For several weeks they underwent no visible change; and had they not been sullied with dust, and the drops of grease from the candles held over them, I am confident they might have remained as entire as ever; for, even a few months ago, the bodies were as firm and compact as at first, and, though pressed with the finger, did not yield to the touch, but seemed to retain the elasticity of the living body. Even the shroud, though torn by the rude hands of the regardless multitude, is still strong and free from rot. Perhaps the most singular phenomenon is, that the bodies seem not to have undergone the smallest decomposition or disorganization. Several medical gentlemen (I think you did so yourself) have made a small incision into the arm of the infant; the substance of the body was quite firm, and every part in its original state.—Lady Kilsyth was of the family of Dundonald. This appears from Crawford's Peerage, and other undoubted authority. She is there called Jean, daughter of Lord William Cochrane, son and heir of William Earl of Dundonald. It is equally certain that she was first married to the Viscount Dundee; and even after she married her second husband, she still retained this title: for he was then the heir-apparent only of the title and estates of Kilsyth, and of course, till the death of his father, she was not called Lady Kilsyth. There was a singular circumstance attending this connection.

she had come on a visit to Colzium, the seat of the family of Kilsyth, about a year after the battle of Killicranky, in which her husband, the Viscount Dundee, fell. At that time it was said William Livingston (afterwards Viscount Kilsyth and her husband) first paid his addresses to her. As a pledge of his love, he presented her with a ring; but, as ill luck would have it, she dropped it next day in the garden. To lose a ring in such circumstances, and so soon, was no doubt regarded "as an evil omen;" a liberal reward was therefore offered to any person who should find and restore it: but in vain. It could not be found; and till the year 1796, nearly a century after, was never heard of. At that time, however, the tenant of the garden, when digging potatoes, discovered it in a clod of earth. At first he regarded it as a bauble; but the moment the legend became apparent, the tradition came fresh into his recollection, and he instantly supposed it to be the ring of Lady Kilsyth. It is of gold, and about the value of ten shillings; about the breadth of a straw, and without any stone. The external surface is ornamented with a wreath of myrtle, and on the internal surface is the following legend, 'Zours onlly and euer.' This ring is believed to be in the possession of Sir Archibald Edmonston of Duntreath, the proprietor of the Kilsyth estates." Antiquities.

It was at Kilsyth that the celebrated James Marquis of Montrose gained his greatest victory over the covenanters in the reign of Charles the First. He appears to have possessed military talents of a very distinguished sort, and at the same time to have been a man of remarkable accomplishments. Some poems written by him still remain, and are expressed in a stile of wonderful elegance when we consider the period at which he lived. He appears to have understood, better than any officer of his Celebrated Marquis of Montrose.

Antiquities. His skill in war.

time, the important part of the art of war, by which an inferior army may be rendered superior to one of greater numbers, by directing its whole force against the centre of the enemy's line, and thereby dividing it into two parts, each of which may be vanquished in succession. It was by this art that the celebrated Epaminondas broke the power of Sparta by means of the victories of Leuctra and of Mantinea; and it was by the same device that Gustavus Adolphus, arranging his troops in deep columns and solid squares, was enabled to break the centre of the enemy's line, and to carry confusion towards whatever quarter he directed his efforts. This mode of conducting armies, by drawing up a large portion of the troops in a deep column, whereby to break an enemy's line, or of directing the whole force of an inferior army against each half of the hostile troops in succession, while the other half is amazed by a shew of attack, has never failed to prove successful when carried into effect by an intrepid or a desperate leader; and in our own times we have seen the success with which it was attended in the Italian and other campaigns of Bonaparte. When used against artillery, by crowding together a great part of an army, it hazards their utter destruction; but if this is avoided, their success against an enemy, not conducted upon similar principles, has always been certain. Montrose returned from his travels while Charles the First was in the midst of his contest with the parliament. Being introduced to the king, and meeting with a cold reception, he joined the covenanters: but his importance being discovered, greater attention was paid to him by the court; and with that fickleness which is apt to mark the conduct of men in times of civil commotion, he abandoned his new friends, and under the most desperate circumstances joined the royal cause. The king being defeated at

History of Montrose.

Marston-Moor in England, could give him no troops; but he obtained from the Earl of Antrim 1100 Irish infantry, very ill-armed. Having been joined by 1300 Highlanders, he attacked Lord Elcho, who lay at Perth with 6000 covenanters, and defeated him, and destroyed 2000 of his men. He next marched northwards, in order to rouse the Marquis of Huntly and the Gordons, who had taken arms before, but been suppressed by the covenanters. At Aberdeen he attacked and entirely defeated Lord Burley, who commanded 2500 men. Montrose, however, by this victory, did not obtain the end he proposed; the Marquis of Huntly showed no inclination to join an army where he was so much eclipsed by the general. Montrose was now in a very dangerous situation. Argyle, reinforced by the Marquis of Lothian, was behind him with a great army. The militia of the northern counties, Murray, Ross, and Caithness, to the number of 5000, opposed him in front, and guarded the banks of the Spey, a deep and rapid river. In order to save his troops, he turned aside into the hills; and after some marches and counter-marches, Argyle came up with him at Faivy Castle; and here, after some skirmishes, in which he was always victorious, Montrose got clear of a superior army, and by a quick march, through these almost inaccessible mountains, put himself absolutely beyond their power. Antiquities. Battles.

It was the misfortune of this general, that very good or very ill fortune were equally destructive of his army. After every victory his soldiers went home to enjoy the spoil they had acquired; and had his army been composed of these only, he must have soon been abandoned altogether: but his Irishmen, having no place to which they could retire, adhered to him in every fortune. With these, therefore, and some reinforcements of the Atholmen

Antiquities. and M'Donalds, Montrose fell suddenly upon Argyle's country, letting loose upon it all the horrors of war. Argyle collecting 3000 men, marched in quest of the enemy, who had retired with their plunder; and he lay at Innerlochy, supposing himself to be still at a good distance from them. The Earl of Seaforth, at the head of the garrison of Inverness, and a body of 5000 new-levied troops, pressed the royalists on the other side, and threatened them with total destruction. By a quick and unexpected march, Montrose hastened to Innerlochy, and presented himself in order of battle before the covenanters. Argyle alone, seized with a panic, deserted his army. They made a vigorous resistance, however, but were at last defeated and pursued with great slaughter; after which Montrose was joined by great numbers of Highlanders. Seaforth's army dispersed of itself; and the Lord Gordon, eldest son to the Marquis of Huntly, having escaped from his uncle Argyle, who had hitherto detained him, now joined Montrose with a considerable number of his followers, attended by the Earl of Aboyne.

The leaders of the covenanters now sent for Baillie, an officer of reputation, from England, and joining him in command with their former general, Urrey, sent them with a considerable army against the royalists. Montrose, with a detachment of 800 men, had attacked Dundee, a town much attached to the covenant, and having carried it by assault, had given it up to be plundered by his soldiers, when Baillie and Urrey, with their whole force, came upon him. He instantly called off his soldiers from the plunder, put them in order, secured his retreat by the most skilful measures, and having marched sixty miles in the face of an enemy much superior, without stopping, or allowing his soldiers the least sleep or refreshment, at last

secured himself in the mountains. His antagonists now divided their forces, in order to carry on the war against an enemy who surprised them as much by the rapidity of his marches, as by the boldness of his enterprises. Urrey met him with 4000 men at Alderne, near Inverness, and trusting to his superiority in numbers (for Montrose had only 2000 men), attacked him in the post which he had chosen. Montrose having placed his right wing in strong ground, drew the best of his forces to the other, and left no main body between them; a defect which he artfully concealed by shewing a few men through trees and bushes, with which that ground was covered. That Urrey might have no leisure to perceive the stratagem, he brought instantly his wing to the charge, made a furious attack on the covenanters, drove them off the field, and obtained a complete victory over them. Baillie now advanced in order to revenge Urrey's defeat; but he himself met with a like fate at Alford. Montrose, weak in cavalry, lined his troops of horse with infantry, and after putting the enemy's horse to rout, fell with united force upon their foot, which were entirely cut in pieces, though with the loss of the gallant Lord Gordon on the part of the royalists. Having thus prevailed in so many battles, which his vigour had always rendered completely decisive with regard to the army which opposed him, Montrose descended into the south of Scotland; that is, across the Forth. The covenanters assembled their whole force, and gave him battle at Kilsyth, and here he obtained his most complete victory; no less than 6000 of the covenanters were killed upon the spot, and no remains of an army were left to them in Scotland. Edinburgh opened its gates, and the principal nobility joined the royalist standard; but this last victory proved fatal to Montrose. His troops, consisting of Highlanders, being enriched, accord-

Antiquities.

Battle of Kilsyth.

Antiquities.

ing to their estimate of riches, by the plunder which they had gained, rapidly deserted him, and fled to their native mountains, to enjoy the fruits of their enterprise. Having advanced towards the English border with his remaining force, and being misled by false intelligence in a country hostile to his cause, Montrose was defeated in Ettrick Forest, and compelled to fly northward into the Highlands. After the death of the king, Montrose made another effort to raise the Highlanders; but in his first attempt he was taken prisoner, and put to death, by his inveterate enemies the covenanters. To this day it is easy to distinguish, upon the little hill where he encamped before the battle of Kilsyth, the arrangement and size of his tents, which were formed of turf. His ground was well chosen, and probably proved decisive of the combat. Around it every little hill or valley still bears the name, or records the transactions of the day; such as, Bullet and Baggage Know, the Drum Burn, the Slaughter How or Hollow, *Kill-e-many-Butts*, &c. &c. In the Bullet-Know and neighbourhood bullets are found every year, and in some places so thick that you may lift three or four without moving a step. In the Slaughter-How, and a variety of other places, bones and skeletons may be dug up every where; and in every little bog or marsh for three miles, especially in the Dullater Bog, they have been discovered in almost every ditch. The places where the bodies lie in any number may be easily known, as the grass is always of a most luxuriant growth in summer, and of a yellowish tinge in spring or harvest. The hilt of a sword and part of a saddle, with a variety of coins, have been found in different places, and at one time a gold ring with an escutcheon was discovered.

But the eastern part of this county, in the neighbourhood of Stirling, Falkirk, and St Ninian's, &c. is most

worthy of the attention of the antiquarian; although, as this is the most cultivated and active part of the county, the visible vestiges of ancient buildings or transactions are by no means numerous. The remains of the Nunnery of Emanuel or Manuel are situated on the borders of Stirlingshire, upon the west bank of the water of Avon, about a mile above the bridge of Linlithgow, in the parish of Moranside or Muiravonside. It was founded about the year 1156 by King Malcolm the Fourth, surnamed the Maiden, and was a priory occupied by nuns of the Bernardine or Cistertian order, to whom belonged thirteen convents in Scotland. Besides the endowments bestowed by the royal founder, it received considerable donations from others at different periods. King William, surnamed the Lion, made a grant to it of the tenth of all his revenues in the shire and borough of Linlithgow, both money and victual; Alexander the Second made a donation of the mills of Linlithgow, with all their sequels and appurtenances; and Roger de Avenel bestowed on the holy sisters a chalder of wheat, to be paid by him and his heirs out of his barns of Abercorn at Christmas, yearly. The prioress of this place, whose name was Christina, swore fealty to Edward the First, July 4th, 1292; as did her successor, named Alice, at Linlithgow, in 1296. This nunnery had possessions in the shires of Edinburgh and Air, as well as in those of Linlithgow and Stirling, as appears by an order of Edward to the sheriffs of these shires to reinstate the prioress in possession of her lands within their several jurisdictions, in consequence of her having sworn fealty to that monarch. Of this nunnery little remains except the west end of the church. The fragment contains an arched door or gateway, with three small Gothic windows over it, and over these a circular one. This structure is of hewn stone, but unadorned;

Antiquities.

Emanuel Nunnery.

Antiquities. yet there is an elegant simplicity in it, and with the beauty of the surrounding objects it makes a very picturesque appearance. Part of the south wall of the church was standing till the beginning of the year 1788, when the river having risen to an unusual height, it was swept away by the violence of the waters with part of the bank used as a cemetery. William Forbes, Esq. of Callander, the proprietor, caused the bank of the river to be repaired, which will probably protect these remains from farther injury. This monastery came into the hands of the crown by the forfeiture of the Earl of Callander and Linlithgow, to whose predecessor it had been given some time after the reformation. Near this nunnery, but on the opposite side of the river, lies the field where the battle was fought between the Earls of Lennox and Angus during the minority of James the Fifth, in which the former was defeated and slain. Sir Robert Sibbald, in his History of Stirlingshire, says, Near to Emanuel some curious capellaries are found. It is said the tomb of the prioress Alice was to be seen here a few years ago; upon which was her figure, with a distaff; an uncommon instrument to be put in the hands of a prioress.

Among the remains of antiquity which once existed in abundance on the banks of the Carron, in the parish of Larbert, once stood the celebrated building denominated, by the inhabitants of the neighbourhood, *Arthur's Oven*; the origin of which exceedingly puzzled antiquarians. It was a round building open at the top, like the Pantheon at Rome, but of far inferior workmanship and dimensions. From the ground to the summit of the dome the perpendicular height was twenty-two feet; the diameter in the inside was nineteen feet and a half. Boethius is the chief historian who gives any account of its more perfect state. He tells us that its area.

Arthur's Oven.

within was surrounded by stone seats; that on the south was an altar; and that the floor had been paved with square stones. Buchannan calls it *Templum Termini*; and many antiquarians have considered it as a temple built to the god Terminus, the protector of land-marks, by Agricola on his fixing here the boundaries of the Roman empire. This valuable piece of antiquity was destroyed by the late proprietor, Sir Michael Bruce, for the purpose of constructing a miserable dam-dyke, with the stone of which it was built. A flood of the river Carron in a short time punished the sacrilegious violation of the temple which for ages had adorned its vicinity, by sweeping away the work erected by the Gothic knight. Dr Stukley is said to have been so much enraged against the destroyer of this ancient work, that he drew Sir Michael Bruce carrying off a lapful of stones, and the Devil goading him along. An engraving of the piece is said to have been published by the Antiquarian Society of London in their Repertory. Antiquities.

The parish of Dunnipace is supposed to have received its name from two artificial mounts near the church. *Dun* signifies *hill* in the ancient Celtic, and these mounts were hills of peace, or spots, either erected in commemoration of some important treaty, or as the spot where such treaties were frequently concluded. They are sixty feet in perpendicular height, and raised in a conical form. A part of one of the mounts towards the west was carried away, as Buchannan says, by a flood in the river Carron; and the course which the river had taken when it made the encroachment is still visible. The Romans anciently had one of their most important towns at Camelon near Falkirk; but there are now few vestiges of it remaining. It was the most important of the British towns in this Dunnipace.

Antiquities. quarter when the Romans made themselves masters of the country. A small inland village now stands near its site; but the sea is represented as having approached once so nearly to it, that it was accounted a maritime town. Castlecarry and Rough Castle, farther up the country, were the two principal Roman stations upon the wall between Camelon and Dunbarton.

Great battle. But the eastern part of the county of Stirling is chiefly remarkable as the scene of those sanguinary conflicts for national independence, which, however interesting or calamitous in themselves, leave few traces behind them to a distant age. At Stirling and Falkirk, and last of all at Bannockburn, took place three of the most sanguinary of those conflicts in which the Scots, in the war occasioned by the disputed succession to their crown, contended for independence against the superior power of the English monarchs. In that contest the Scots laboured under the disadvantage, not only of being the weaker state, but of being distracted by intestine divisions, and of long wanting a leader of sufficient authority. The rashness of their character, and their want of means to keep armies long in the field, led them repeatedly to engage in pitched battles, which almost always proved advantageous to the invader.

Dunbar. The first contest was near Dunbar. The whole force of Scotland was there drawn up on the height; but impatiently leaving their advantageous post, and pouring down in disorder on their enemies, they were defeated and dispersed. The consequence was, that the whole country was overrun, and an English government established. As formerly mentioned, Wallace rose against this government, and after a variety of struggles he gained an important victory at Stirling. The English commander, Warren, rashly insisted upon crossing the bridge in sigh of the Scottish army, instead of travelling round by the fords of

Stirling.

the river; the result was, that his army was attacked before it was properly formed, or the whole had passed over, and a total rout with dreadful carnage was sustained. This compelled the able and ambitious Edward the First to advance in person with an immense army to Falkirk, where Wallace and the Scots were totally defeated, and the kingdom completely subdued. Robert Bruce, a young man, fought there in the English army; and the Scottish historians say that he encountered Wallace in person in the field, and that Wallace found means, instead of obstinately fighting his antagonist, to demand a future meeting with him. Bruce is said to have kept the appointment, and to have been urged, by the eloquence of Wallace, into that path of patriotic ambition which he afterwards successfully pursued. In the mean while, the victory at Falkirk once more placed Scotland completely in the hands of Edward. Two Scottish leaders, Sir John Graham and Sir John Stewart, who fell there, were both buried in the churchyard of Falkirk. The stone which was laid on the grave of Sir John Graham had some sculpture upon it, which the hand of time was fast obliterating. At length another stone was erected, with decorations and an epitaph, the whole being supported by pillars. When the letters of the inscription were nearly defaced, another of a similar kind was put over it; and when it also had suffered considerably by the lapse of time, the late William Graham of Airth, Esq. erected a third, after the same manner as the two former. The inscriptions are as follows:

Antiquities.

Ancient battle of Falkirk.

Mente manuque potens, Valli fidus Achates,
Conditur hic Gramus, bello interfectus ab Anglis.
xxii. Julii anno 1298.

Here lies Sir John the Grame, baith wight and wise,
Ane of the chiefs who rescuit Scotland thrise:
Ane better knight not to the world was lent,
Nor was gude Grame of truth and hardiment.

Antiquities. Not far from the tomb of Sir John Graham lie the ashes of Sir John Stewart, *brother of the steward* of Scotland, from whom the royal family descended. His grave is marked out by a stone without a name.

After the loss of the battle of Falkirk, and the subsequent death of Wallace, the conquest projected by Edward, and which he had taken fifteen years to accomplish, seemed complete; but the fire was only smothered. Robert Bruce, the grandson of the competitor for the crown against Baliol, either stimulated by ambition, or apprehensive that he was accounted an object of jealousy by the English monarch, fled to Scotland, and by the aid of his brother Edward, of Douglas, and various other chiefs, succeeded at last in rousing the country to arms, or, as it was called, to rebellion. At this critical period Edward the First died on his march, with a vast army intended to overwhelm all resistance in Scotland. His son, Edward the Second, partly delayed the enterprise. The war languished on the side of the English; and both parties wasted each other's territory with desultory invasions. At last, in 1314, Edward the Second mustered an immense force, which historians undoubtedly have greatly exaggerated, by representing it as amounting to 100,000 men. Edward Bruce was besieging the castle of Stirling, which agreed to capitulate if not relieved on the 24th of June. The English monarch advanced with his whole army to relieve the garrison of Stirling; and Robert Bruce assembled his whole forces, amounting to 30,000 men, besides an undisciplined multitude, 15,000, consisting of servants and others, who in these times followed after the camp. The strength of the Scottish army, when compared with the English, consisted of their phalanx armed with spears; but they were always greatly inferior in heavy cavalry, or men at arms,

Battle of Bannockburn.

Numbers of the armies.

did in archers. As Bruce was on the defensive, and had the choice of the ground leading to the castle of Stirling, he fixed upon a spot where he could convert the battle into a conflict of infantry. To protect his flank, he dug pits on the steep banks of Bannockburn, of about two feet deep, wherever cavalry could approach, and covered them with turf laid over brushwood; and with this precaution, on the 23d of June, the Scots saw the army of Edward approach, and prepared to decide the fate of their country. The front of their army extended from the brook called *Bannockburn* to the neighbourhood of St Ninian's, pretty nearly upon the line of the present turnpike-road from Stirling to Kilsyth; and the stone on which the king is said to have fixed his standard is still to be seen. Robert commanded all his soldiers to fight on foot. He gave the command of the centre to Douglas, and Walter the young steward of Scotland. His brother Edward had the command of the right wing, and Randolph of the left; the king himself taking charge of the reserve, which consisted of the men of Argyle, Carrick, and the islanders. In a valley to the rear, said to be to the westward of a rising ground now called *Gillies Hill*, he placed the baggage and all the useless attendants on his army. The English sent a body of 800 horse, commanded by Sir Robert Clifford, round by the low grounds on the east towards the castle, but they were opposed by Randolph with a body of Scots armed with spears, who defeated their antagonists. The garrison of the castle was all the while neutral, having obtained a truce on condition of surrendering if not relieved by force on the succeeding day. Towards the evening the vanguard of the English approached the Scottish line, in the front of which Bruce was riding, inspecting his troops, and watching the progress of his adversary. He had a crown above his hel-

Antiquities.

Order of the Scottish troops.

Antiquities. met, and a battle-axe in his hand. An English knight, Henry de Bohun, advanced to encounter him; but Bruce, with the first blow with his battle-axe, cleft the head of his antagonist; upon which the English vanguard retired.

Order of the English troops. On Monday the 24th of June the whole English army moved on to the attack. The van, consisting of archers and lancemen, was commanded by Gilbert de Clare, Earl of Gloucester, nephew to the English king, and Humphry de Bohun, constable of England; but the ground was so narrow that the rest of the army had not sufficient room to expand itself, so that it appeared to the Scots as consisting of one great compact body. The main body was brought up by Edward in person, attended by Aymer de Valance, Earl of Pembroke, and Sir Giles de Argentine, two experienced commanders. Maurice, abbot of Inchaffray, placing himself on an eminence, celebrated mass in the sight of the Scottish army. He then passed along the front barefooted, with a crucifix in his hand, and in few words exhorted the Scots to fight for their rights and liberty. The Scots fell down on their knees; which being perceived by Edward, he cried out, "They yield; see they implore mercy." "They do," answered Umfraville, one of his commanders; "they do implore mercy, but not from us. On that field they will be victorious or die." As both parties were violently exasperated against each other, the engagement began with great fury. Bruce, perceiving that his troops were greatly annoyed by the English archers, ordered Sir Robert Keith, the mareschal, with a few armed horsemen, to make a circuit and attack the archers in flank. This was instantly accomplished; and as the weapons of the archers were useless in a close encounter, they could make very little resistance; at the same time, their flight spread disorder through the whole army.

Detail of the battle of Bannockburn.

Historians do not inform us with any correctness how the English cavalry were posted or employed in the conflict. It is generally supposed that they fell into the snare laid for them by Bruce: but Barbour does not mention that circumstance, though he minutely describes Bruce's stratagem. It seems, therefore, probable that the English, finding the ground narrow, had dismounted the greater part of their cavalry, after the example of the Scots. In the first part of the conflict the loss of the Scots must have been great, for Bruce was under the necessity of advancing with the reserve; and, notwithstanding the narrowness of the ground, was able to fall into the line. The movement executed by Keith appears to have been decisive of the battle. At the instant that it was performed, Bruce himself, finding all was at stake, had advanced in person with the reserve. The effect of the double movement was, that on the one hand the English archers, who to the Scots were the most terrible part of the army, were removed, while the advance of the reserve dismayed the remainder of the troops. At the same critical moment, when the English were staggering in consequence of the renewal of a part of the Scottish front, and of the confusion of their own flank, an additional event occurred, whether in consequence of accident or stratagem, does not clearly appear. The great body of servants and retainers of the nobles who attended the Scottish camp, and hoped, in case of victory, to share the plunder, ascended the hill between the field of battle and the baggage; and there, to the English army, already startled by the events in their flank and front, had the appearance of a fresh body of troops come to the assistance of their enemies. The result was that they were panic-struck and fled. The young Earl of Gloucester attempting to rally the fugitives, was thrown from his horse, and cut

Antiquities.

Antiquities. to pieces, which augmented the confusion. Many sought refuge among the rocks in the neighbourhood of Stirling Castle; and many were drowned in the rivers. Pembroke and Sir Giles de Argentine had never quitted Edward during the action; but now seeing the battle irretrievably lost, Pembroke constrained the king to quit the field. Sir Argentine refused to fly. He was a man of great valour, and had a high reputation in Scotland. According to the vulgar opinion, the three most eminent worthies in that age were the Emperor Henry of Luxemburg, Robert Bruce, and Giles de Argentine. He is said to have thrice encountered two Saracen warriors in Palestine, and to have killed them both each time. His valour now availed him but little; for rushing into the midst of the Scottish army, he was instantly cut in pieces. Douglas, with sixty horsemen, pursued Edward closely. At the Torwood he met Sir Lawrence Abernethy, who was hastening to the English rendezvous with twenty horsemen. The latter soon abandoned the cause of the vanquished, and joined Douglas in the pursuit of Edward, who fled to Linlithgow. He had scarcely arrived there when he was alarmed by the approach of the Scots, and again obliged to fly. Douglas and Abernethy followed him with such assiduity, that (as Lord Hailes chooses to Latinize the expression of an ancient historian), *ut vel insequendo vorarent eum*; but notwithstanding their utmost efforts, Edward got safe to Dunbar, where he was received by the Earl of March, who protected him till he could be conveyed by sea to England.

Death of Giles de Argentine.

Such was the decisive battle of Bannockburn, the greatest defeat the English ever sustained from the Scots. On the side of the latter no persons of note were slain, except Sir William Vipont and Sir Walter Ross, the favourite of Edward Bruce; and so grievously was Edward afflicted by the death of this man, that he ex-

claimed, "Oh that this day's work were undone, so Ross had not died!" On the English side were slain twenty-seven barons and bannerets, and twenty-two taken prisoners. Of knights there were killed forty-two, and sixty taken prisoners. Of esquires there fell 700; but the number of the common men who were killed or taken was never known with any certainty. The Welsh who had served in the English army were scattered over the country, and cruelly butchered by the Scottish peasants. The English who had taken refuge among the rocks in the neighbourhood of Stirling surrendered at discretion. The castle was surrendered, and the privy-seal of England fell into the hands of the King of Scots. The spoils of the English camp were immense, and enriched the conquerors, along with the ransom of many noble prisoners who fell into their hands. Robert shewed much generosity in his treatment of the prisoners who fell to his share. He set at liberty Ralph de Monthermer and Sir Marmaduke Twenge, two officers of high rank, without ransom; and by humane and generous offices alleviated the misfortunes of the rest. The dead bodies of the Earl of Gloucester and the Lord Clifford were sent to England, that they might be interred with the usual solemnity. There was one Baston, a Carmelite friar and poet, whom Edward is said to have brought with him in his train, to be spectator of his achievements, and to record his triumphs. Baston was made prisoner, and was obliged to celebrate the victory of Robert over the English. This he did in wretched Latin rhymes, which, however, procured his liberty. After the battle of Bannockburn the Earl of Hereford retreated to the castle of Bothwell, where he was besieged by Edward Bruce, and soon obliged to surrender. He was exchanged for the wife, sister, and daughter of the king, the young Earl of Marr, and the Bishop

Antiquities.

Antiquities.

of Glasgow. The terror of the English, after the defeat at Bannockburn, is almost incredible. Walsingham asserts that many of them revolted to the Scots, and assisted them in plundering their own country. "The English (says he) were so bereaved of their wonted intrepidity, that one hundred of that nation would have fled from two or three Scotsmen." It is unnecessary to remark, that this consternation speedily passed away; but, in the mean while, the Scots recovered their independence. The most important effect of the battle of Bannockburn was, that it put an end to all questions about the right of succession to the crown, and to the divisions, and consequent weakness, which had embarrassed the Scots in their preceding contests. The glory of Robert Bruce was complete; his name was unboundedly popular; and no candidate for the throne could for the future hope to supplant his descendants. Accordingly, though the barons retained their turbulence, and the authority of the crown was inadequate to the internal good government of the kingdom; yet, as no dispute thereafter existed about the person of the monarch, the throne always formed the rallying point of the national independence, to such a degree as to prevent the hope of future conquest.

Effects of the battle of Bannockburn.

There are a few vestiges of this celebrated battle of Bannockburn still existing. In a garden at Kenhouse, in the parish of St Ninian's, stand two large stones, erected, in memory of the contest, on the eve of the battle of Bannockburn, between Randolph, the leader of the Scottish left wing, and Clifford, the commander of the body of English cavalry that attempted to march round to the relief of Stirling Castle. It has lately been called Randolph-Field. On a place called Broxbrae, the stone supposed to have supported Bruce's standard is called the Bear-stone. About a mile from the field of battle, a party of

English who had attempted to rally have given the name of Bloody Field to the spot where they fell. A place called Ingram's Crook has perhaps derived its name from Sir Ingram Umfraville. Antiquities.

Upwards of a century and a half after the battle of Bannockburn, another battle was fought, within a mile of the same field, on a tract of ground called Little Canglout. On the east side of a small brook, called Sauchie-Burn, about two miles south from Stirling, James the Third, with the view, which all the European kings pursued, of rendering himself independent of his nobles, entrusted the administration of affairs to persons of low birth, and who must depend for the stability of their power upon the favour of the prince alone: the indignan barons rose in rebellion, and partly by threats, and partly by promises, drew the king's eldest son, the Duke of Rothsay, a youth of fifteen, into their party. On the 11th June 1488, James was defeated at Sauchie-Burn, and having fled, he fell from his horse in the act of leaping a ditch, and remained insensible in consequence of his fall. He was taken up without being known, and carried to a mill called Beaton's Mill, where he was laid carelessly in a corner, and covered with a coarse garment. On recovering his senses, he felt himself so weakened as to be apprehensive of dissolution, and desired that a priest might be brought to give him absolution. At that instant three of the king's most implacable enemies happened to pass by. One of them, being a priest, gave him absolution, but at the same time stabbed him to the heart. Part of the house or mill where this took place still exists, and is converted into a dwelling-house, the under wall of which is a remnant of the old buildings. Slaughter of James the Third.

At a much later period, the neighbourhood of Falkirk and Stirling was the scene of less eventful warfare. In

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Battle of Falkirk in 1746.

1746, after the rebels had returned, in consequence of of their own dissensions, from an inroad into England to within 100 miles of London, being joined by some reinforcements, they laid siege to the Castle of Stirling, and spent much time and labour uselessly upon that object. General Hauley was by that time appointed the royal commander in chief, in place of Sir John Cope, who had been beaten at Prestonpans. Hauley advanced from Edinburgh with a considerable body of troops to raise the seige. He stopt on the ground above Falkirk, near the field where Wallace had fought, and Graham and Stewart fell, in attempting to defend the independence of Scotland. On the 17th of January 1746, the alarm was given that the prince's army was advancing by the Torwood. The royal troops were drawn out to meet them; but the rash idea was adopted, the absurdity of which is demonstrated by the military history of all European nations, that a body of infantry, particularly of irregular troops like the Highlanders, would prove unable to resist a charge of cavalry. The Highlanders, in an instant, demonstrated the absurdity of the notion, drove back the cavalry upon the line of infantry, which was thrown into confusion; and the Highlanders, with the advantage of a storm of wind and rain pelting upon their backs, and in the faces of their antagonists, were enabled to continue the pursuit down the hill. The rout was ultimately complete; but the loss of the beaten party was not entire, as at Preston. A ravine or deep glen had divided a part of the royal infantry from the prince's troops, and the contest was there conducted by firing from the opposite summits of the glen. In this quarter the Highlanders suffered severely; and as this part of the line was never broken, though it ultimately retired after the rest, it is probable that an abler general might have converted the

error committed at the beginning of the day into the means of victory, by attacking his antagonists in their flank while in the disorder occasioned by a rash pursuit. But nothing of this sort was attempted; and Hanley and his troops went off to terrify the whigs and presbyterians, that is, the loyal inhabitants of Edinburgh, with the news of their defeat. The rebels, in the mean while, continued their fruitless siege of the Castle of Stirling, till the approach of the Duke of Cumberland with an immense army compelled them to retire northward. They used the church of St Ninian's as a magazine; and, either from accident or design, it was blown up, and several lives lost by the explosion. It is remarkable enough, that the steeple, in consequence undoubtedly of its great weight, remained entire. A new church was built soon after the destruction of the former; but for what reason is not known, the new church was erected at some distance from the old; and thus the traveller never fails to be surprised by the incongruity of a church and a steeple in the neighbourhood of each other standing totally disjoined and seemingly unconnected. Antipicts.

Having said so much concerning the ancient history of this county, it will here be proper to take notice more particularly of the important modern work which terminates here, and to which we have repeatedly alluded; namely the great canal which joins the eastern and western seas, or the Frith of Forth with the Frith of Clyde. This work cannot, with propriety, be considered as belonging exclusively to Stirlingshire; it ought more properly to be regarded as a national undertaking, seeing it crosses the island, and enters into the different counties which it meets in its passage, Stirling, Dumbarton, and Lanarkshire: but as it was begun in the county of Stirlingshire, and as we have now described the other coun- Canal.

Antiquities.

with which it is connected, this appears a proper place for taking notice, in a particular manner, of that work.

Projects for uniting the two seas.

We have already mentioned the narrowness of the British island in this quarter, and that the mountains run from west to east, or rather north-east, leaving intervening valleys adapted to a work of this nature. The territory of Scotland stretches so far northward, into a tempestuous sea of difficult and tedious navigation, that the communication by water between the eastern and western coasts, though at no great distance from each other, is extremely difficult. This, at an early period, appears to have suggested the project of uniting the two seas, from the Forth to the Clyde, by an inland canal. In the reign of Charles the Second, a proposal was made for constructing such a canal, of a sufficient depth to convey transports and small ships of war across the island; but the expence of such a work was far too great for that reign, which in Scotland was extremely unhappy. The project, however, seems to have again revived in 1723, when a survey was made of the country with this view by Mr Gordon, who is well known as the author of the *Itinerarium Septentrionale*; but the affair appears once more to have fallen asleep. In the year 1761, the late Lord Napier, at his own expence, employed Mr Robert M'Kell to make a new survey, and to form an estimate of the expence of a canal from the mouth of the river Carron upon the Forth to the mouth of the Yocker Burn, which enters the river Clyde about five miles below Glasgow. A favourable report from Mr M'Kell was laid before the Board of Trustees for the Encouragement of Fisheries and Manufactures in Scotland. They instructed the late Mr Smeaton to make another survey and estimate for a canal five feet deep. This estimate amounted to the sum of L. 60,000.

In the mean while, the mercantile community of Glasgow and its neighbourhood began to be impatient for the accomplishment of an object of so much commercial importance. They saw that the work had hitherto been prevented from being executed by the too magnificent views of the persons who had speculated concerning it. When government, or when men of rank, considered the subject, the idea which filled their imaginations was the sublime conception of breaking down the barriers which Nature had reared, of forming a junction between the oceans, and of seeing fleets prepared for war, with all their cannon and stores, traversing the center of the continent. The merchants of Glasgow had no such mighty projects in view; they wanted only a cheap mode of conveying their commodities across the country, and they knew that this could not be obtained if enormous sums were to be expended upon the work, as these could only be defrayed by heavy tolls, which must fall upon the more bulky and cheap commodities, that were least able to afford the expence; they resolved, therefore, instantly to make a small canal of four feet deep, to cost L. 30,000. This sum the Glasgow merchants subscribed in two days, and authorised an application to be made to parliament to sanction the work, which they expected to complete in a couple of summers. The pride of the Scottish nobility and gentry was wounded by what they accounted the presumption and mercenary views of the traders of Glasgow. A meeting was instantly held at Edinburgh, which was attended by multitudes of persons of rank, who resolved to oppose in parliament the construction of a canal upon the small scale which had been proposed. A violent paper-war commenced between the parties; many portions of which are to be seen in the weekly and monthly magazines, or other periodical chro-

Canal.

Contests about the canal.

Canal. nicles of those times. On the one side, it was contended that the country would be for ever disgraced by the paltry and dirty ditch which the merchants proposed to make; and that, when two oceans were to be joined, the work ought to appear worthy of the people by whom it was undertaken, whose duty it was to labour, not for themselves alone, but for the increasing commerce and the wants of future generations. On the other hand, the merchants alleged, in the first place, that the proposed magnificent work would defeat its own object, and prove of no value; that Scotland had very little internal trade; and that the tolls which that trade could afford to pay were totally inadequate to clear the interest of the money which must be expended in forming a broad and magnificent canal; that in this way the canal would be of no use, and land-carriage would continue to be preferred to it; that the state of the trade could afford nothing better than a wet ditch in which small boats might be dragged; and that such a ditch was all that was wanted for every purpose of utility. It was added, that even supposing these objections out of view, by engaging in a larger undertaking, the want of money, and other unforeseen obstructions, would occur to delay the work for twenty or thirty years; that, in the mean while, the present generation of men would pass away without having received any benefit from it.

The nobility and gentry of the country, if not victorious in the argument, were at least successful in preventing the bill proposed by the Glasgow merchants from passing in the House of Commons. Thereafter, in 1777, they began a subscription at London for uniting the two seas by a canal seven feet in depth. The estimate of the expence amounted to L. 150,000. The sanction of parliament was obtained to this scheme; and the subscribers were incorporated by the name of "The Company of

Proprietors of the Forth and Clyde Navigation." The joint stock of the company was declared to consist of 1500 shares of L. 100 each, with liberty to borrow L. 50,000; and the holders of five shares were declared entitled to vote by themselves or proxies, and to be elected managers of the company. On the 10th of July 1768, the work was begun under the direction of Mr Smeaton. The operations commenced at the east end; and the late Sir Laurence Dundas of Kerse performed the ceremony of cutting and removing the first spadeful of earth; and the spade is said to be kept in his house, as a relic in memory of the transaction. Many difficulties occurred in the execution of the work, which had not been foreseen; but at length, on the 10th of July 1775, the canal was fit for navigation as far west as Stockingfield, which is within a few miles of Glasgow, and the point where the side-branch to that city was intended to go off. In November 1777, the side-branch was completed to Hamilton Hill, which is still nearer Glasgow; and a bason was made there for the reception of vessels, and granaries and other buildings erected by the neighbouring proprietors.

Canal.

History of the work.

At this time the expence of the navigation had far exceeded the original estimate. The whole money originally subscribed, together with a subsequent loan, and all the toll-dues hitherto received, had been expended upon the work; while, at the same time, the annual revenue from the canal did not much exceed L. 4000. The shares of the company's stock were sold for 50 *per cent.* discount, and little chance appeared that the canal would ever be carried forward to join the Clyde. The canal remained in this languishing and unfinished state till 1784, when government granted the sum of L. 50,000, out of the rents of the forfeited estates in Scotland, towards completing

Canal. the work. Government stipulated for a power to draw proportional dividends with the proprietors; but the latter were authorised to add their arrears of interest to their principal sums in computing the amount of their shares. In July 1786 the committee of management renewed their operations. The work was conducted by Mr Robert Whitworth; and on the 28th of July 1790 the navigation was opened from sea to sea. Ceremonial is less regarded in public affairs in Scotland than in most other countries. It appears, however, that all mankind are in some degree fond of solemnity and pomp; and, accordingly, the opportunity of opening the canal was seized for a display of this sort. The committee of management, accompanied by the magistrates of Glasgow, were the first voyagers on the completed navigation. On the arrival of the vessel at the termination of the canal, at Bowling Bay, on the river Clyde, and after descending the last lock into the Clyde, the ceremony of uniting the eastern and the western seas was performed by the chairman of the committee, with the assistance of the engineer, Mr Whitworth, by the symbol of pouring into the Clyde a hogshead of the water of the Forth. A vast number of spectators attended, and expressed, by loud acclamations, their joy on account of the completion of the work.

The bason at Hamilton Hill having been found inadequate for the reception of the great number of vessels which now navigate the canal, as well as inconvenient for the trade of Glasgow, eight acres of ground were purchased by the Canal Company in the near vicinity of that city; and here basons have been formed on a larger scale, and buildings erected, so as to form a village, called Port Dundas. From Port Dundas the Company have formed a junction with what is called the Monkland Canal, which is of lesser dimensions, belongs to a different company of proprietors, and runs from Glasgow about twelve miles

into the parishes of Monkland, in Lanarkshire. The chief object of the Great Canal Company, in forming this junction, consisted of obtaining thereby a large supply of water, of which the Monkland Canal enjoys a superfluity. Canal.

Though the canal was originally intended to be no more than seven feet in depth, yet by adding to the height of its walls along the whole, it was afterwards deepened to eight feet. Dimensions.

The following are the dimensions of the canal:

	Miles.
Length of the navigation from Forth to Clyde.....	35
Length of the collateral cut to Glasgow.....	2¼
From Port Dundas to the bason of the Monkland canal	1
	38¼

The number of locks on the eastern side of the island, or declivity towards the Forth, amounts to twenty. On the western side, or the declivity towards the Clyde, the the number of locks is only nineteen. The cause of this inequality is, that on the east the canal terminates in the Grange Burn, where there is so little water that the vessels are left nearly dry at ebb tide; whereas on the west it ends in the Clyde, where the water is eight feet deep without the help of the tide; and thus one lock is saved.

	Feet.
The greatest height of the canal is.....	156
Medium breadth of the surface of the water.....	56
Medium breadth at the bottom.....	27
Depth of water over the whole.....	8
The length of the locks between the gates.....	74
Breadth of the locks.....	20
Fall or rise obtained by each lock.....	8

Vessels of nineteen feet beam, sixty-eight feet keel, and drawing eight feet water, can pass through the whole canal. It passes, in its course, over ten considerable aque-

Canal. duct bridges, and upwards of thirty smaller ones or tunnels. It is crossed by thirty-three draw-bridges. The greatest of the aqueduct bridges is that over the Kelvin, which was begun in June 1787, and finished in April 1791. It consists of four great arches of mason-work. Its height is about eighty-three feet, and it crosses a valley of upwards of 400 feet in breadth; and is undoubtedly one of the most stupendous works of the kind that is anywhere to be seen. To supply such a canal with water was itself a great work. It is furnished with six reservoirs, which cover about 409 acres of land, and contain upwards of 12,000 lockfuls of water; and should the increase of trade require such a measure to be adopted, means exist of more than doubling the supply of water. The tonnage-dues on the canal are 3d. *per* ton for each mile, with exceptions in favour of lime, manure, and other articles. The tonnage-dues from sea to sea are 5s. 10d.; from Grangemouth to Glasgow, 3s. 10d.; and from Bowling Bay to Glasgow, 2s. The affairs of the Company are now prosperous. The original shares have risen greatly above the price first paid for them. The principal part of the revenue arises from grain and timber, the last of which comes from the shores of the Baltic. The whole expence of the canal at the 1st of January 1791 had amounted to above L. 330,000. The aqueduct bridge over the Kelvin cost L. 8509.

The affairs of the Company were originally under the direction of two general meetings, one at London, and another at Edinburgh, each of which met quarterly; and the London meeting elected annually the committee of management. It was found that the general meetings at London and Edinburgh did not always agree in their views, and gave contradictory instructions to the committee of management. A new constitution was therefore sanctioned by act of parliament in 1787, investing the di-

rection of the Company in a governor and council in London, and a committee of management at Glasgow. Both of these are elected by a general meeting held annually in London in the month of March. Canal.

From the history of this canal, it seems evident, that when great works of an expensive kind are to be undertaken for the improvement of any quarter of the country, where commerce and agriculture are not far advanced, the expence of them ought to be defrayed, not by individual adventurers with a view to their own profit, but out of the national wealth. To enable private persons to derive an adequate profit from the money which they expend in this way, it becomes necessary to impose tolls, which are apt to prove injurious to the utility of the work; and they seldom have any other mode of avoiding such a measure, than that of rendering the work adequate to the present, instead of the future wants of the country. Government, on the contrary, acting for the nation considered as an unperishing body, cannot better expend a portion of the public revenue or wealth, than in forming beneficial establishments which may prove a permanent source of aggrandisement and of riches. When the Glasgow merchants, at the commencement of the undertaking which we have described, proposed to execute it upon a very diminutive scale, and at a trifling expence, their conduct was that of prudent individuals acting judiciously for their own present interest; but had their scheme succeeded, and received the sanction of a statute, by occupying the waters on the tract of the canal, it would have been rendered impossible, at a future period, to form a greater canal. On the other hand, the nobility and gentry of the country, who proposed to labour for future times, and to form a larger navigation than was immediately wanted, acted with little prudence as individuals, although they undoubtedly proposed what was best at the long run for the

Population. nation, considered as a community of persons whose children were expected for ages to inhabit the different quarters of the island, and who ought to consider every part of it as their common country.

The population of the county of Stirling stands thus:

Parishes.	Population in 1755.	Population in 1790-8.	Population in 1801.					
			Persons.		Occupations.			
			Males.	Females.	Persons employed in agriculture.	Persons employed in trade, &c.	All other Persons.	Total of Persons
Airth	2316	2350	860	995	527	739	589	1855
Alva	436	612	361	426	74	159	464	787
Baldernock	621	620	377	419	247	46	503	796
Balfron	755	1381	740	894	354	783	497	1634
Bothkinnar	529	600	282	293	67	42	35	575
Buchannan	1699	1111	375	373	616	49	83	748
Campsie ...	1399	2517	1387	1519	707	983	1216	2906
Denny	1392	1400	920	1113	138	178	1717	2033
Drymur ...	2789	1607	773	834	370	103	1134	1607
Dunnipace & Larbert	1864	4000	2062	2155	4 5	2041	74	4217
Falkirk	3932	8020	4211	4627	—	—	—	8838
Fintray	891	543	440	518	412	217	329	958
Gargunnock	956	830	454	500	441	52	461	954
Kilearn	959	973	501	538	508	284	247	1039
Kilpatrick East	—	—	447	461	159	740	9	908
Kilsyth	1395	2450	840	922	151	1264	498	1762
Kippen	1799	1777	530	718	372	130	746	1248
Lecrept ...	—	—	136	112	68	17	163	248
Logie	—	—	330	341	20	19	632	671
Muiravonside	1539	1065	504	566	141	93	836	1070
Ninian's, St.	6491	7079	3217	3632	2510	2689	1650	6849
Polmont ...	1094	1400	1037	1157	343	209	1642	2194
Slamannan..	1209	1010	416	507	458	197	268	923
Stirling	3951	4698	2311	2945	26	514	4716	5256
Strathblane	797	620	352	382	296	330	108	734
Jail of Stirl.	—	—	12	3	—	—	—	15
Total	38813	46663	23875	26950	9458	11878	18617	50825

From the account already given of this county, the degree of salubrity which belongs to it will be sufficiently understood. The high country in the centre between the two seas, being exposed to heavy rains, is no doubt trying to the human constitution; but, at the same time, such countries appear sufficiently healthful. The constitutional habits of the inhabitants become adapted to them, and long life and health appear to be generally enjoyed in hilly and elevated districts, providing human food be found in tolerable abundance. Perhaps the level and moist tract which this county contains, exposes the human constitution to a severer trial than the winds and the rain of the mountains. At the same time, the vicinity of these last, and the fierce winds, which descending from them, sweep along the valleys, prevent the existence of dangerous epidemical complaints. Intermitting fevers or agues, however, are not unfrequent in the Carse, though totally unknown in the higher regions; and labourers employed in the open fields, who have recently removed from the higher country, are said to be most exposed to them. It does not appear, however, that this evil is by any means extensive or important. It is worthy of notice, that in all parts of the country, persons employed in iron-works, notwithstanding the severe heat to which some of them are at times exposed, enjoy good health, and the employment is considered as salubrious. Climate.

The inhabitants of this district partake, in a powerful degree, of the character of the west of Scotland. As Stirling was originally the seat of the secession in Scotland, the influence of religious sentiments has been deeply established in that quarter, and is much more perceptible than in the south-eastern part of the island. This is always a matter of much importance in any part of the country. When manufactures are brought into it, more prudent and

Climate. regular habits prevail, during a length of time, that could not otherwise have existed; and thus the pursuit of riches, by the absence of costly vices, is conducted with greater success than might otherwise have occurred.

LINLITHGOWSHIRE.

Boundaries. BETWEEN the county of Midlothian or the shire of Edinburgh on the east, and Stirlingshire on the west, is the county of West Lothian or Linlithgow. It has in general a northern or north-eastern exposure, ascending from the Frith of Forth towards the south or south-west, till it reach the high grounds which look down upon the vale of Clyde. It extends, from east to west, about fourteen miles along the Frith of Forth, which forms its northern boundary. It is separated from the county of Edinburgh on the east and south by the water of Almond, and by the Briech, which is one of the streams that fall into the Almond. On this side the boundary of the county is about nineteen miles in length. It is divided from Stirlingshire on the west by the water of Avon; and here and on the south-west it touches a part of Lanarkshire. This last side is about thirteen miles in extent. It is, upon the whole, a sort of irregular triangle. Its medium breadth, from north to south, is little more than seven miles, and its medium length about sixteen miles. Its whole extent is probably about 112 square miles, that is, about 57,008 Scottish acres.

There are scarcely any lands so high in this county as to claim the name of a mountain, being rather more properly denominated rising grounds or high land. There are, however, several of these interspersed throughout the shire, which serve to beautify it, without much diminishing its value, as many of them are planted with thriving woods, and all of them afford good ordinary pasture for cattle and sheep. The names of them are Mons Hill, Craigie Hill, Dundas Hill, in Dalmeny parish; Craigton Hill, Benns Hill, in Abercorn parish; and Bonny Craig or Hill, in Linlithgow parish; with the high ridge of lands rising in a range immediately east of the town of Bathgate; the loftiest of which may not much exceed 1000 feet above the level of the sea. From these different heights, in fine weather, the greatest part of the county can be seen; and all of them afford uncommonly varied and pleasing views. The fine expanse of water in the Frith of Forth is every where seen. Its shores are covered with beautiful plantations, laid out upon a regular and variegated territory, consisting of gentle ascents and declivities, interspersed with the seats of the nobility and gentry. Face of the Country.

In this county there are no rivers or waters of any importance, but those by which the county is bounded. Several rivulets or burns flow in different directions towards the Forth, and are sufficient for the use of the corn-mills within the county. No fish are caught, excepting a few fresh water trout. There is a lake on the north side of the town of Linlithgow, above a mile in length, and about one-half mile in breadth, in which pike, perch, and eel are found in considerable quantities. Linlithgow is even, in some degree, celebrated for caring eels, by rolling them up with spices, when they receive the name of *collared eels*, from the resemblance which the folds bear to a collar. Waters.

Soil and Climate.

The soil of this county is extremely diversified. In it are to be found rich carse clay, and fertile soil, partaking in some degree of the nature of sand or gravel mixed with this rich clay, usually denominated loam; but as this is a coal-country, clay of all sorts abounds in a great degree. It is supposed that the lands which consist of light gravel and sand amount to about 7000 acres. Those called loam are of equal extent. Of good clay soil there are about 14,000 acres; and of cold, wet, and unpromising clay soils, about 18,000. The high rocky land extends to about 10,000 acres, and the mosses to about 1000.

This county, lying nearly in 56° north latitude, may naturally be supposed cold; but being rather inclined to a level surface, and favoured with the sea-breeze along the north side, and the frequent blowing of the south-west winds, which are commonly soft and warm, the climate is very temperate, neither very cold, nor very sultry or hot. Two-thirds of this shire are thought to enjoy, if not the first, nearly the second climate, in this part of the island, being placed at a considerable distance from the hills on all sides. The upper or south-western part of the county does not enjoy so good a climate. Its elevated situation, with the neighbourhood of the mosses and moors, either of this county or of the middle ward of Lanarkshire, render it bleak and damp during almost three-fourths of the year. Indeed, in this county, and a great part of Scotland, more is suffered from the variableness of the weather than from its severity. The very heaviest falls of snow have seldom been known to exceed thirteen inches in depth, and they do not continue long. The alternate frosts and thaws, which often prevail in the months of spring, are most prejudicial to husbandry, together with the chilly east winds in May and June. A farther spe-

cimen of the climate may be taken from the time of sowing and other operations in farming; spring seeds, as beans, peas, and oats, are commonly sown down from the last week of February to the middle or end of April; barley from the last week of April to the 20th of May. It seldom succeeds well, as to good quality of grain, if much later sown. The hay-harvest commences about the second week of July; and the corns generally begin to be cut the last week of August, and end with October. In the upland parts of the county, in some seasons, it is Martinmas before all is got in. Wheat is sown from the 1st of September to the middle of October with success; but if later, without the soil be rich and dry, and the weather good, with less certainty of prospering well. Soil and Climate.

This county is possessed by between thirty or forty landholders, whose estates or yearly income may be from L. 200 to L. 6000 a-year, besides a few of inferior rental, and others who possess a small number of acres in the immediate neighbourhood of the two borough-towns of Linlithgow and Queensferry. Of the greater estates there may be ten above L. 1000 a-year. The farms here, with regard to extent, are from 50 to 300 acres; most of them from 70 to 200; always excluding those tenants who possess a number of separate farms. In this county, there appears, upon the whole, to be nearly *one-third part* in wood, in old pasture, and in artificial grasses. Few farms have less than *one-fourth* in pasture and clover-grass. Many have *one-third*; and around almost every gentleman's seat there are not less than 20 acres; many have from 100 to 200, and some from 1000 to nearly 2000, in woods and old grass. The reason that pasture-grass prevails so much here seems to be the vicinity to Edinburgh. Numbers of persons are employed in buying and selling of cattle and sheep in this and the adjacent State of property.

Agriculture. Leases.

counties, who always afford a higher rent for inclosed lands than corn-farmers are able to give on a nineteen or twenty-one years lease. The graziers, for the most part, have only from one to seven years leases; and the landholders find an interest in letting their lands thus in grass, as these are thereby more enriched, and they have always their rents paid for that immediate crop at the end of the season. Leases are generally granted for nineteen or twenty-one years in corn-farms; although, in some instances, for twenty-four, thirty-eight, and even fifty-seven years. The grass-tenants are always on short leases, as already observed. The entry is commonly at Martinmas to farms for tillage. The terms of payment, by some, are at Martinmas and Whitsunday for the crop immediately preceding; by others quarterly, in equal portions. Grass-rents, as already mentioned, are paid before the end of the year for that year's crop. Rents are mostly paid in money by all who have lately got leases; although a considerable number of farms still pay yearly in grain, in money, in fowls, and in carriages of coals. The leases, in general, bind the tenant to leave a certain proportion of the land in grass at the termination of his right; the proprietors being aware that this is the only absolute security they can possess that the lands shall not be scourged or worn out.

We account it unnecessary to enlarge upon the agriculture of this district; because, on account of its vicinity, and similarity in many respects, nearly the same cultivation is employed as in the two other counties denominated the Lothians, to the eastward of it, upon the southern shore of the Forth. The upper or southern part of the county is the poorest; but there improvements are rapidly proceeding; and even the highest moors are incroached upon by the efforts of skilful and enterprising

cultivators. Red clover and rye-grass are everywhere sown for hay. Wheat scarcely fails to succeed after potatoes; but the summer-fallow is often found necessary on account of the stiffness of the clay-soil. Wheat is frequently used, also, after a crop of hay, the clover being ploughed down in a rank state. Oats are the most general sort of grain, because best accommodated for every soil and mode of culture. The rotation generally followed on the best clay soil is, 1st year, Summer-fallow, with dung; 2d, Wheat; 3d, Beans and peas; 4th, Barley; 5th, Clover and rye-grass for hay; 6th Oats; 7th, Summer-fallow, &c. *2dly*, If taken up from grass: 1st year, Oats; 2d, Turnip, with dung; 3d, Barley; 4th, Clover and rye-grass; 5th, Oats; 6th, Turnip. *3dly*, For a light soil or loam: 1st year, Turnips dunged; 2d, Oats or barley; 3d, Clover for hay; 4th, Pasture; 5th, Oats; 6th, Turnip. Many more might be mentioned, were it necessary, or were it possible to follow them. The variable climate, the being near or distant from great cities or towns, the having the command of more or less dung, the being enclosed or not; all tend to vary the mode of cropping. Every intelligent farmer understands well the utility of mixing green crops frequently. The crops in this district frequently suffer from a small species of the grub-worm in lands that have been for any considerable time in old grass, when ploughed up again for oats, especially if the lands be over-run with moss, or what is here called *fog*, and the soil tolerably dry. Sometimes the first crop from clay suffers; but especially the second, and even the third, if no summer-fallow intervene. They generally begin their depredations in the months of May and June, if the plants be stunted at that time, which is apt to be the case by the dry east winds then prevalent. Several acres may be seen, in an ordinary

Agriculture.

Rotations.

Agriculture.

sized field, cut up by them eating and preying upon the roots of the oats. Sometimes wheat, and even barley, have been cut off by them, although less frequently. There has been found no cure here for this complaint; neither liming plentifully, nor the application of the roller, has any effect. If the black crow or rook could come at them, this would bid fairest for diminishing their numbers, as it swallows them with avidity, even in preference to grain.

Inclosures.

Not above one-fifth or one-sixth of this county remains uninclosed, and the inclosures are of all sorts; such as stone-walls, sunk-fences, with or without a hedge at the top, or Galloway dikes; but the fence of hedge and ditch is the most prevalent. The best method of pruning hedges is here generally supposed to consist of sloping them from bottom to top, like the roof of a house, or perhaps of rounding them a little, so that they shall approach the form of a semicircle.

Both the former and present proprietors of lands in this county have given great attention to forming plantations. On almost every estate a considerable extent of territory is found under young and old plantations; so that, to the eye of the traveller, the general surface of this county, which is seen from a variety of spots of no great elevation, appears a well-wooded district. That truly valuable improvement, of planting the higher and more waste districts of the county, is still carried on, and is well understood to be the first requisite towards the improvement of such a territory.

Scenery.

As a great part of this county is in as high a state of cultivation as the nature of the soil will permit, as it is generally inclosed, and every where abounds with plantations, while the surface is in general of a waving and irregular aspect, it exhibits to the eye, in a variety of quarters, a great proportion of rich and pleasing scenery;

not, indeed, of that romantic sort for which the rugged glens which divide the Scottish mountains are so justly celebrated, although in this respect the county is far from being deficient: But the most striking feature in its general appearance consists of its exhibiting proofs that it is the residence of a skilful and prosperous people, by whom it has been fertilized and adorned. In particular, the southern shore of the Forth, which is here naturally beautiful, has been richly ornamented. At the eastern part of the county, the Park of Barnbougle, the seat of the Earl of Roseberry, is laid out with plantations formed in the very best taste, and in such a manner as to improve and shelter all the richer portions of the soil, to cover with trees the more elevated spots, and to exhibit, in its most beautiful aspects, the face of the country; which at one part rises into a considerable hill that presses northward into the Forth. The shore of Linlithgowshire suddenly rises into a ridge adorned by culture and plantations. From the summit of this ridge, at Dalmeny, and from thence westward by the ancient seat of the family of Dundas, and from thence by Hopeton House, a succession of views may be met with, which are scarcely to be equalled in any quarter. This is particularly the case in the neighbourhood of Queensferry, where, by the sudden approximation of opposite promontories, the Forth is formed into a narrow strait, which on each side suddenly expands into an extensive bay with richly ornamented banks. In every quarter, along the shore of the county, the Forth assumes a singular variety of aspects; hills and promontories, and winding bays, lofty shores, villages, and cultivated fields, bordering upon a fine sheet of water, which takes the appearance of a great lake, a noble river, or a broad sea, according to the points of view in which it is seen. Above all, in one spot, the ridge which rises from the

Scenery.

Beautiful coast.

Scenery. shore is crowned with one of the most stately mansions in Scotland, and which is probably not excelled in magnificence of aspect by any palace or residence in the island.

Hopeton House. This is Hopeton House. In the approach to this building its situation appears very grand. It is seated on a magnificent lawn, which forms a kind of terrace along the Forth. This lawn extends more than a mile in the front of the house, and at the extremity of it, the Forth, which is still a noble estuary, making a bold sweep, winds round it, and presents the appearance of a wide, extensive lake, interspersed with islands, and enlivened with a variety of shipping. Behind the house the ground is more various, breaking into hills, valleys, and promontories, which shoot into the Forth. All the grounds, to a considerable extent, appear planted and adorned; and the house is very judiciously flanked with wood against the north winds which attack it from the Forth. On this side, as well as in front, the Forth appears in various shapes, assuming sometimes the form of a lake, and sometimes of a river, according to the point from which it is seen. The former shape it assumes when it is seen in lengthened perspective; the latter, when it is viewed directly across. Under both ideas it is equally grand. Around this vast and magnificent scenery, arise mountains in various forms, and at various distances. In short, the whole scene, and all its appendages, on every side, as far as the eye can traverse, is great and noble; and the house is so fixed as to receive the full advantage of its situation. The house is a very magnificent piece of architecture. It was begun by the celebrated architect Sir William Bruce, and finished by Mr Adam, who is believed to have added the wings. Within the building some of the apartments are of considerable grandeur; but, in general, they are smaller than a stranger is led to expect in a structure of such

magnificence. Indeed the contrivance of the inside of the house scarcely corresponds with its architecture, and with its external magnitude. Not only are the apartments small, but the paintings with which some of them are adorned, though well chosen, are of a small size, and thereby, in some degree, contribute to augment the discordancy between the interior and the outside of this very princely structure. Minerals.

A great part of the upper district of this county, and also its lower part, towards the north-west, abounds with coal, ironstone, and freestone minerals, which, as already mentioned, are often indicated by the clayey surface. Coal is wrought in a great variety of quarters, particularly at Borrowstounness, on the sea-shore; and in most of the upper parishes it is also found. In the latter it appears to form a part of the great coal-field of the Shotts hills. The minerals are variously disposed. In general, strata of ironstone accompany the coal; and some of the strata of the latter are of considerable value. Coal.

One of the most remarkable collieries or coal-works that we ever had in this island was that wrought at Borrowstounness under the sea. The strata or beds of coal being found to continue or penetrate under the sea at this place, the colliers had the courage to work them half-way across the Frith. There was a building, or moat as it was called, half a mile from the shore, where there was an entry that went down into the coal-pit under the sea. The building was formed into a round quay, built so as to keep out the sea, which there flowed twelve feet in height. Hither the coals were brought up; and being here deposited, a ship could lay her side to the quay or moat, and take in a cargo of coal. This colliery belonged to the family of Kincardine. The fresh water of the mine was drawn out upon the sea-shore by an engine moved by Old coal work below the sea.

Minerals. water. This coal-pit continued to be wrought many years, to the great profit of the owners, and the wonder of all who saw it; but at last an unexampled high tide drowned the whole at once. The colliers had not time to escape, but perished in it. In the same neighbourhood the coal is still wrought to nearly the same extent below the sea; but the former hazard is avoided, by bringing the produce of the mines under ground to the shore, without attempting the hazardous plan of making an opening within the flood-mark.

For the purpose of rendering the coal of the upper part of this county extensively useful, it has been proposed to conduct a canal from Edinburgh to Glasgow, which might bring to the eastward, at a cheap rate, a part of the mineral treasures which exist in the declivity of the Shotts hills.

Lead mine. In the Bathgate hills lead was in former times found. At that period the property of them belonged to the ancestors of the Earl of Haddington, who are said to have been considerably enriched by the profits of these mines. They retain the appellation of silver-mines, because the silver was always extracted from the lead, and a ton of metal produced seventeen ounces of silver. The lands in which these mines are situated now belong to the Earl of Hopeton; and trials to discover lead have several times been made in the old workings in the vicinity, but without success; so that the mine is now supposed to have been exhausted.

Freestone. Freestone abounds in almost all quarters of the county; and a vast bed of it exists upon the sea-coast of the best quality. A quarry of this stone, to the westward of Queensferry, has been wrought to the extent of about three acres. Large quantities of the stone are said to have been exported for building the fortifications and quay of

Dunkirk. The finest part of the stone-work of the Earl of Fife's house at Banff was executed here and sent round by sea. A monstrous but dismal font, five feet in diameter, lies opposite to the quarry, within the sea-mark, covered with sea-weeds and shell-fish. It is said to have been intended to be sent to the continent; but its particular history is not known. Grinding stones are here prepared and exported, particularly to the shores of the Baltic. Minerals.

There is a basaltic rock on the south side of Dundas Hill, 250 yards in length, and in height about sixty or seventy feet. The masses are in an irregular state, formed like pillars, separated by channels; but many of the pillars consist of well-defined regular prisms. The rock is almost perpendicular in its front, and consists of a light bluish stone of a close texture. Near the foot of the steep bank on which the basaltic rock rests is a bog of about nine acres, containing a bed of shell-marl. In different parts of the county abundance of whinstone is found, and also of that sort of grey granite called *moor-stone*. Basaltic columns.

The royal boroughs in this county are Linlithgow and Queensferry.

The royal borough of Linlithgow is at the distance of sixteen miles from Edinburgh, on the road to Stirling or Glasgow by Falkirk. It is supposed by some antiquarians to be the *Lindum* of Ptolemy, and that the Romans had a military station adjoining to it. Linlithgow is not now what it once was; and its buildings, from the antiquity of many of them, have rather an appearance of decay. It consists of one street, running from east to west, about three-fourths of a mile in length, with several lanes and a row of gardens on the north and south sides of the town. The street, towards the east and west, is tolerably broad and airy, but about the middle is contracted. Opposite to the Linl'th-gow.

Linlithgow.

town-house is a vacant space, where the cross formerly stood, and where the principal well now stands. It is of a fantastic and whimsical appearance, water being made to pour continually out of the mouths of several figures of animals. The time when Linlithgow was erected into a royal borough is not known. From the deed of submission to Edward the First, it appears then to have been governed by two bailies. In the reign of David the First it was declared to be one of the principal boroughs in the kingdom. Several houses in the town formerly belonged to the knights of Jerusalem. Linlithgow was formerly a place of considerable trade, opulence, and splendour; but, from the union of the crowns, especially after the junction of the kingdoms, it declined in all these respects. It once had an exclusive right of trade from the water of Cramond to the mouth of the Avon; and Blackness was specially assigned as its port. Vessels with foreign commodities frequently arrived there; and these again exported the productions of the town and country around. Warehouses were erected at Blackness, some of which still remain; and the officers of the revenue had a station there. Through the influence of the family of Hamilton, the customhouse was afterwards transferred to Borrowstounness. The town of Linlithgow strenuously opposed the erection of Queensferry into a borough; but the matter was at last compromised on the following terms: That the latter should pay the former the annual sum of ten merks Scots: That the freemen of this borough should enjoy all the immunities of Queensferry without reciprocation: That on the arrival of any foreign ship, before it was unloaded, the magistrates there should inform the dean of guild of Linlithgow; so that within twenty-four hours the burgesses might, if they pleased, purchase half the cargo, timber only excepted. The annual

LINLITHGOW PALACE.

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acknowledgment of ten merks is still received; and there are repeated instances in the council-books of intimation made according to the original contract. By statute the Linlithgow firlot is the standard for measure of grain in Scotland. After the union, Queen Anne's ministers sent several Winchester bushels, formed of brass, to be distributed among the Scottish boroughs; but some of them still remain in the town-house, as several of the boroughs made no application for them: and thus that attempt, like many others, to introduce an equality of measures throughout the kingdom, failed. The custom is still kept up here, by the town-council and incorporations, of annually riding round their marches. The town is governed by a provost and four bailies, a dean of guild, a treasurer, twelve merchant counsellors, and the deacons of eight incorporations. There is a weekly market on Friday, to which considerable quantities of grain are brought. The town has six fairs in the year; the chief of which is St Magdalen's, on the 2d of August. They were once greatly resorted to, but of late have sunk into horse-markets. There is a butcher-market here, which is well supplied. The tanning of leather, and the manufacture of shoes, are principal employments in this town; and brewing, distilling, and bleaching, are carried on to some extent in the vicinity. Linlithgow.

The most remarkable object in Linlithgow is the Palace, now in ruins. It stands on a rising ground running into a lake; a situation which could scarcely fail to prove pleasing. It has, when viewed from the north, the appearance of an amphitheatre, with a descent on three sides and terrace-walks on the west. King Edward the First built a palace, or rather fort, upon this spot, in which he resided for a whole winter. But it was afterwards, in 1307, taken by means of a stratagem by one Binnoch or Binny, a Scotchman, who secretly favoured the party of The Palace.

Linlithgow.

Bruce. Binnoch supplied the castle with hay; and being well known, had free access at all times. He proposed to Bruce to conceal some armed men in his carts, apparently loaded with hay. These being admitted, made themselves masters of the place. Binnoch was rewarded with some lands in the neighbourhood. In those days a king had nothing but lands to give; but in consequence of the continued wars and forfeitures, he had always abundance of them. The Binnings of Wallyford were said to have been descended from Binnoch who took the castle of Linlithgow, and had for their arms a cart of hay, with the the motto, *Virtute Doloque*. In the reign of Edward the Third it was again in the hands of the English. In A. D. 1424, according to Fordun, this palace was burned, as was also the town and nave of the church, by night: but by whom it was rebuilt is not known; nor is it said whether this fire was occasioned by accident or treachery. After the accession of the Stuart family to the throne, this became a fixed royal residence; and the queens of Scotland had it in several instances assigned to them as a jointure-house. James the Fourth was more attached to it than to any of his other palaces; and he, as well as James the Fifth and Sixth, ornamented it greatly. It is at present a magnificent ruin; the greater part of it five stories high. The inside is embellished with good sculpture, considering the time in which it was executed. Over the inside of the grand gate was a statue of Pope Julius the Second, with the triple crown, who sent a consecrated sword and helmet to James the Fifth. It long escaped the fury of the reformers; but at last, in the early part of the late century, a zealous blacksmith destroyed it. The palace is all of polished stone, and covers an acre of ground. On an outward gate, detached from the building, are the four orders of knighthood borne by the king; *viz.* the

garter, thistle, holy ghost, and golden fleece. Within the palace is a handsome square: one side is more modern than the other, having been built by James the Sixth. The building was kept in good repair till the year 1746, when, being used as a barrack, it was accidentally set on fire by the king's troops. The pediments over the windows are dated 1619. In one of the other sides is a room ninety feet long, thirty feet six inches wide, and thirty-three high. At one end is a gallery with three arches, perhaps intended for a band of music. Narrow galleries run quite round the old part, to preserve the communication with the apartments. The parliament chamber is a handsome room. Here was born, on the 8th December 1542, the unfortunate Queen Mary. Her father, James the Fifth, then dying at Falkland, of a broken heart, for the miscarriage at Solway Moss, foretold the miseries that hung over her and Scotland. "It came," said he, "with a woman," alluding to the manner in which the family of Stuart obtained the crown, by a marriage into the family of Bruce, "and it will be lost with one." The chapel was built by James the Fifth. The church is a handsome building, and some of the windows are extremely elegant. Here is still shewn the aisle where King James the Fourth saw the apparition that warned him of the impending fate of the battle of Flodden. There is no doubt, that while the king attended the evening service in St Catharine's aisle, one in an unusual form and habit suddenly appeared, and dissuaded him from the expedition into England, on which he was so strongly bent. It is supposed to have been a stratagem of his queen; but the catastrophe which followed, in a superstitious and credulous age, converted it into a real apparition and a prophecy, though it is evident that the king himself had given it no credit. The church, which is

Linlithgow.

Palace chapel.

Linlithgow.

used for parochial service, is a fine Gothic building. The time of its construction is not known; but the west end of it seems more modern than the rest. Its length from east to west is 182 feet; the breadth 100; the height about 90 feet. It is adorned with a handsome spire, on the top of which is an imperial crown. The outside of the church was once adorned with a multitude of statues; but the reformers demolished them all, except that of the archangel Michael, the patron of the town. James the Fifth ordered a throne and twelve stalls to be erected in this church, for himself and the knights of the thistle; but his death prevented the execution of this design.

At Linlithgow were anciently various religious establishments. In 1290 the inhabitants founded a convent for the Carmelites or White Friars. It was consecrated to the Virgin Mary, and stood on the south side of the town, on an eminence which is still called the *Friars Brae*; and a well near it is called the *Friars Well*. The Dominicans, or Black Friars, had also a monastery here. St Magdalen's, on the east of the town, was an *hospitium*, or place of entertainment for strangers; and the eminence above it is called *Pilgrim Hill*.

Assassination of the Regent Murray.

In Linlithgow the house is still exhibited from which the Earl of Murray, then regent of Scotland, was shot by Hamilton of Bothwellhaugh. It is one of the most deliberate instances of assassination that history records. After the unhappy Mary Queen of Scots, in consequence of her marriage with Bothwell, the murderer of her husband Darnley, had so far excited the indignation of the whole kingdom, previously prejudiced against her on account of her religion, that she had been driven from her throne, and her infant son James the Sixth proclaimed king in her stead, the Earl of Murray, a natural son of her father, and a zealous supporter of the protestant cause, was

made regent of the kingdom. The deposed queen having escaped from Lochleven castle, was supported by the Hamiltons and others; but their forces being defeated at the battle of Langside, she fled into England; and the regent, among other instances of vengeance, authorised one of his dependents to seize the old house of Woodhouselee, which we mentioned when treating of Midlothian, and which belonged to James Hamilton of Bothwellhaugh. Hamilton's lady was residing there at the time, and she was barbarously thrust out of the house, almost naked, at midnight, in winter, to perish in the snow. The unhappy woman, by the morning, was found, not indeed to have expired, but to have lost her reason. Her husband, enraged by the atrocity of this injury, undertook to avenge, upon the person of the regent, at once the misfortunes of his party and his own private wrongs. After some deliberation he selected the town of Linlithgow as a fit spot for his purpose. Having obtained possession of a house in a narrow part of the street, he prepared it secretly for his purpose. He chose an upper room, with a wooden balcony in front, which should prevent his being readily seen from the street; and to prevent his shadow from being observed, he hung the apartment with black. That he might make no noise, he placed a feather-bed upon the floor. The door towards the street was shut, and the whole was considered as an empty house. In the meanwhile the regent was at Stirling; and it was known that he was speedily about to go to Edinburgh; in which case he must pass through Linlithgow. He accordingly arrived there on horseback, well attended, and the populace crowded around to see the cavalcade. When the regent arrived at the narrow part of the street, Hamilton, unperceived, took his aim. The ball passed through the body of the Earl of Murray, and killed the horse immediately beyond him. The regent

Linlithgow.

Linlithgow.

fell, and soon after expired. In the meanwhile all eyes were turned to the window from which the shot came, and an attempt was made to enter the house; but the door being strongly barricaded, occasioned considerable delay. When it was at last broke open, the marks were found of deliberate preparation; and it was discovered that the assassin had escaped by the back part of the house; a part of the garden wall having been broke down to permit the admission of a fleet horse, upon which he escaped, and which some of his kindred, to whom the enterprise was known, had kept in readiness for him. The event was of great political importance, and made much noise in Europe. Hamilton fled to France, where the court was hostile to the protestant party, of which Murray had been the head in Scotland. The courtiers there imagined that Hamilton would be a fit person to be employed in the assassination of the celebrated admiral Coligny, the chief of the French protestant party. They thought they could not apply to a more proper person than a man who had just committed an act of the same kind in his own country. A man of rank accordingly suggested the project. Hamilton, shocked at the proposal, cried out, "What, villain! do you suppose me an assassin?" and challenged him on the spot. This piece of history suggests a remark which ought to be considered as of no small importance to ambitious men: *viz.* That it is often more dangerous to quarrel deeply with a single individual than with a great body of people, or even with a whole nation. In public contests, public means of redress are usually adopted. It is seldom that individuals become so frantic as to hazard, in an irregular manner, their own existence on account of the public quarrel; and in the revolutions of faction, views of interest or ambition are often capable of operating the most unexpected reconciliations. Accordingly, as no instance occurs in history in which

assassination, committed to accomplish a public object, ever proved beneficial even to the party in whose favour it was perfofmed, so these acts are happily extremely rare; whereas it has repeatedly happened, from the days of Philip of Macedon downwards, that obscure individuals have, in their private quarrels, destroyed men whom nations were unable to resist. Linlithgow.

It was long considered by zealous presbyterians as an indelible stain upon the character of the inhabitants of this town that the solemn league and covenant was publicly burned here, and that not by any act of government, but by the inhabitants themselves. This event occurred in 1662, on the anniversary of the restoration. The persons who distinguished themselves most in that exploit were one of the bailies named Mylne, and Mr Ramsay, then minister of the parish. This last gentleman had not only sworn to the covenant himself, but pressed it upon others with extreme severity. Like the celebrated Vicar of Bray, he changed his principles with the times, and so prospered. He was made dean of Glasgow, then bishop of Dumblane, and thereafter bishop of Ross. The covenant burnt.

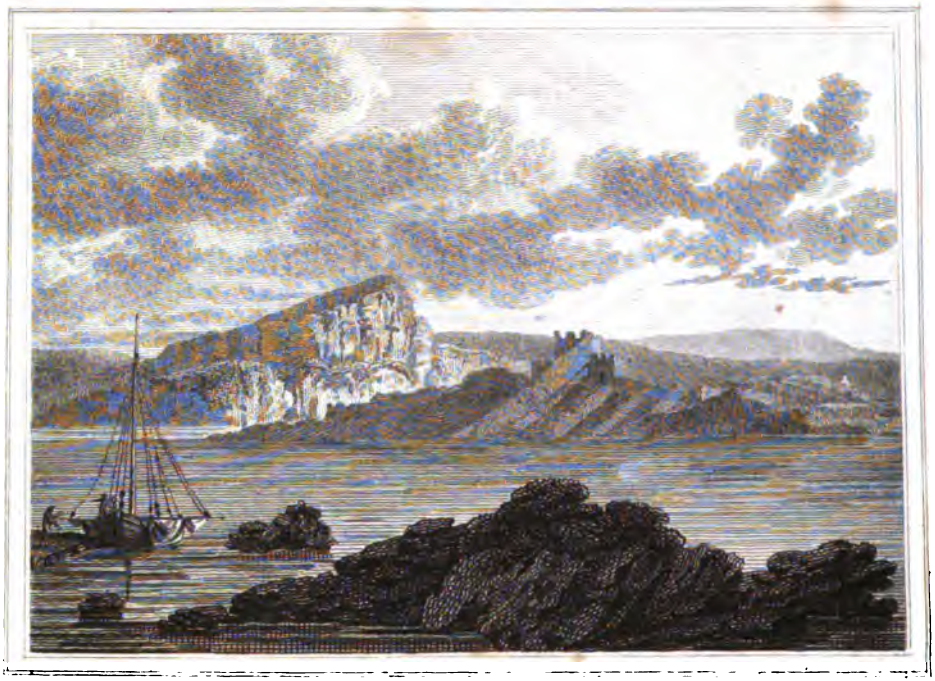
At the time of the reformation the schoolmaster of Linlithgow, called Wingate, was accounted such an adept in theological controversy, that he was selected by the Scottish clergy as one of their champions to defend the catholic opinions against the reformers in many of the public disputations which then took place; and he distinguished himself in various encounters of that sort against John Knox himself. When the reformers prevailed, and the catholics became heretics in Scotland, he refused to be converted; and going abroad, was made abbot of a convent at Ratisbon. Wingate, a theological disputant.

The late Dr Henry, the historian, and one of the clergymen of Edinburgh, frequently resided in this neigh-

Queensferry. bourhood. He bequeathed his books, under certain regulations, to the magistracy and town-council, and the ministers of the presbytery of Linlithgow, with a view to their becoming the foundation or commencement of a public library.

Queensferry. The royal borough of Queensferry is supposed to derive its name from Margaret Queen of Malcolm Kenmore, who had frequented the passage, and probably patronized the inhabitants. Queensferry is nothing more than a village of moderate extent, situated between the shore and the ridge which there rises from the coast and overlooks the Frith of Forth. It is at the distance of nine miles from Edinburgh, on the great road to the north. Its commerce, during the late century, is supposed to have been inferior to that which it enjoyed in earlier times. About the year 1640 shipmasters lived here who possessed above twenty vessels. At present it is believed there is no shipping belonging to it, with the exception, perhaps, of some boats occasionally employed in the fisheries. At the same time, its harbour is useful sometimes as a place of retreat to vessels in hard gales, and also for the importation of the coal consumed by the inhabitants, and the materials used in the soap-manufacture, which has here been at times carried on to a considerable extent.

Bo-ness. Borrowstounness, or Bo-ness, is another sea-port. It is a borough of barony, governed by a bailie appointed by the Duke of Hamilton. It stands, like Queensferry, very little above the level of the sea, and the tide at high-water comes into contact with the north side of the town. The principal street runs from east to west about 350 yards, after which it divides into two, which are continued about 300 yards farther. The houses are low and crowded. From the smoke of numerous salt-pans on the west, and of the Grange coal-works on the east, the air is very con-



INCH GARVEY CASTLE & QUEEN'S FERRY.

stantly filled with smoke, which gives the village rather a sooty appearance. Borrowstounness is a busy place. The coal-works here are believed to have been wrought several hundred years. The stratum of coal is from ten to twelve feet in thickness. A considerable extent of country to the south-east is supplied from them, and a considerable quantity are carried along the coast; but the manufacture of salt consumes a still larger quantity. It is believed that between 30,000 and 40,000 bushels of salt are annually made here. It is not known at what date the salt-works were first established: but the small coal used in them has in this place, from time immemorial, received the singular appellation of *panwood;* a circumstance which has suggested to some persons a suspicion that wood was formerly used as fuel in these works, and consequently that their establishment was antecedent in date to the collieries. But the small coal used to heat the salt-pans is universally called *wood* by the salters on the eastern coast of Scotland. Ship-building has been carried on at Borrowstounness for upwards of half a century; and vessels are built of from forty to four hundred tons; and twenty-five or thirty sail of vessels belong to the town. The harbour of Borrowstounness is considered as very safe, and of easy access. The depth of water in spring-tides is from sixteeen to eighteen feet. To improve and support the harbour, a tax is imposed, under the authority of parliament, which is very common in the Scottish boroughs, that of two pennies Scots money on the Scots pint of the ale and beer consumed in the village. To this has been added an anchorage-duty of 1½d. per ton on every ship entering the harbour. These duties are under the management of trustees elected by the merchants and shipmasters. By means of these funds considerable improvements have been made on the harbour; one of which consists of the construction of a

Villages.

Villages. large bason with four sluices. During spring tides these sluices are opened, and at full sea they are shut; by which means the bason, which contains a great body of water, remains full. At low water, after the retreat of the tide, the sluices are suddenly opened; and the torrent of water, thus obtained, has not only been found adequate to clearing the harbour of all depositations of sand or mud, but has even considerably deepened it. A considerable trade is carried on here to the Baltic; and timber, tallow, hemp, flax, and flax-seed, are imported from thence. When the great canal was first made, the persons interested in the trade of Borrowstounness were anxious that it should terminate there. When this point could not be carried, an attempt was made to form a canal of communication between this town and the termination of the canal. The work was accordingly begun and carried some length, but was afterwards relinquished on account of the want of funds. Here, as in every other port in the Frith, the inhabitants engage in the herring-fishery during those seasons in which a large quantity of that species of migratory fish frequent this coast; but it is a business that too much resembles the hazards of gaming. One year large sums of money are gained, while, on the following year, the employment is worth little or nothing. The Duke of Hamilton, who is superior of the village, and proprietor of the parish in which it stands, has a large house in the neighbourhood, called Kinneel. It is beautifully situated on the shore of the Forth, about fifty feet above the level of the sea.

Bathgate. The village of Bathgate is beautifully situated on a southern declivity at the foot of the hills which bear its name, and which we have already noticed as among the most considerable in the county. This village formed a part of the ample possessions which in 1306 Robert Bruce gave in dowry with his daughter Marjory to Walter,

high steward of Scotland. The steward died here in 1328; and in the neighbourhood stood one of his principal residences. Some traces of his mansion may be seen in the middle of a bog near the town, to which several artificial causeways appear to have been made. Hewn stones have frequently been dug from the foundation by persons still alive; and some kitchen-utensils of copper or brass have been found. Bathgate has seven fairs in the year, in most of which cattle form the principal commodity. As the newest and most frequented road between Edinburgh and Glasgow passes this village, and it stands in the midst of a country in which all sorts of improvements are rapidly carrying on, it may be considered as likely to become of considerable importance. Villages.

Whitburn stands upon the most southern road between Edinburgh and Glasgow, and is important in no other respect than as an inland village, the residence of some shopkeepers, and a considerable number of tradesmen, necessary to the accommodation of the country in the neighbourhood. Here, and in Bathgate, many of persons are employed as weavers by the Glasgow manufacturers. The village is not of an ancient date, and has been formed chiefly in consequence of the cottages having been destroyed which were formerly scattered over the country, and of the inhabitants having removed into villages. Should the proposed canal between Edinburgh and Glasgow ever be formed, this neighbourhood would undoubtedly become of considerable importance on account of the minerals which every where abound. Whitburn.

With the exception of those already mentioned, the remains of antiquity in this county are extremely trifling; but the celebrated Roman barrier, or wall of Antoninus, terminates in this district. We shall state its course on the authority of the survey made by General Roy. Antiquities. Roman wall.

Roman Wall.

Beginning from the western side of the island, General Roy remarks, "That there has been a fort about the church of Old Kilpatrick, seems highly probable, from the stones with inscriptions dug up there, and the space between it and the next, nearly corresponding with what is found to be the mean distance between the several existing stations. That this was likewise the western extremity of the wall is generally allowed; for though some traces of the military way are to be seen to the westward of this village, yet nothing of the ditch or wall can be discerned; neither could it indeed have well answered any purpose to continue it farther, because of the high mountains coming here so close to the Clyde as to have entirely overlooked and commanded those posted behind it. The castle of Dunglass stands near a mile and three quarters west from Old Kilpatrick, on a rocky point that juts a little way into the river, and where the water is deep. Here the Romans would probably have their port; and it is natural enough to suppose that they would endeavour to cover it with some sort of work, though the vicinity and commanding nature of the mountains might prevent their continuing the wall so far.

"Proceeding from Old Kilpatrick eastward, the first faint vestiges of the ditch are to be seen after crossing Sandyford Burn. These, however, soon disappear, and are not to be discovered again before we come to some houses called the Gateshide of Auchintoshen, where the fosse is perceivable, as well as the military way to the southward of it. The traces of the former are nevertheless lost immediately, but recovered anew on the height between that place and the village of Duntocher, by which it seems to have passed, and probably crossed the river where the mill and bridge now stand. This bridge is supposed by some to have been built by the Romans, at

least the westernmost arch, over which it it is plain that a second hath been thrown at some subsequent period: but though perhaps no part of this bridge may be of Roman construction, yet there can be little doubt that the stones whereof it was executed were of their workmanship, and probably taken from the adjoining fort. Having crossed the river, the wall, though now scarcely visible, had certainly fallen in with the north rampart of Duntocher Fort, situated on the height which commands the passage of the river. Little more of this station exists than what is barely sufficient to trace its dimensions. Towards the west end some vestiges of a prætorium or other building may be perceived; and the military way, having from the river ascended the hill in a sweep, passes on the south side of the fort, the centre of which is distant from the church of Old Kilpatrick 3570 yards. From Duntocher Fort the wall can easily be traced eastward, along some gentle rising grounds, to a brook called the Close Burn; which having crossed, it then passes over Hutchison Hill, and descends again to a bottom called the Peel Glen. From some slight appearances of a foundation of hewn stone at this place, it hath been imagined that the Romans had a bridge over the brook; but probably this was only the paving of their ford, a thing customary with them; the deepness of the bottom preventing it being seen from the next station on the wall. Hence, as well as from the name, it is supposed that a small castellum had been established here for the security of the gorge; though, in 1755, the traces of it were scarcely to be discerned. From the Peel Glen the wall rises to the height whereon Castlehill Fort is situated, which, though small, commands a more extensive prospect than any other on the wall, Barhill only excepted. The northwest angle of this station is somewhat higher than the

Roman Wall.

Roman Wall.

rest; and a branch at least of the military way hath passed through it, though it is likely that the Romans had another communication to the southward of this, leading along the bottom of the heights from the Cledden Burn to the fort of New Kirkpatrick, for such whose business did not call them to mount the rising grounds which the wall itself occupied. From the middle of Duntocher Fort to that of Castlehill, keeping to the course of the wall, is 3450 yards. From Castlehill the wall proceeds eastward, and then inclines to the south-east, to gain the rising grounds of Ledeanrough, along which it continues by the Thorn-tree, and afterwards makes another bend south-eastward in descending to New Kirkpatrick; but in this last part of its course, from the long cultivation of the fields, its vestiges are totally obliterated. The fort of New Kirkpatrick stands lower than most we meet with on the wall, having the runlet which afterwards falls into the Allander in front: and as the rising grounds on the right and left of this fort form a sort of gorge or pass, through which it seems to have been apprehended that the enemy might penetrate from the north and north-west; therefore the fort hath not only been made of larger dimensions, but likewise, to render it more respectable, it hath been surrounded with a double envelope, though it is so much defaced by the plough, that, excepting on the south side, it is with much difficulty it can be traced. The military way passes through it, and it is distant from Castlehill only 2450 yards. For some little way to the eastward of New Kirkpatrick the vestiges of the wall are not to be perceived till in ascending the heights, which form the villages of Ferguston and Kilmerdinny, they become again very distinct; near the top of which the first appearances of rampart and parapet are to be seen. These last, however, continue but for a very short space; and

the traces, even of the ditch, totally disappear in descending to a small bottom near Millochan. The military way, which lately kept at a greater distance than usual from the wall, hath now approached it again, and seems to have passed by a single house called Hillend, and thence by the westernmost part of the village of Simmerston towards the river Kelvin. Hence the wall, though its tract is not to be observed, must have gone along the height northward of Hillend, and therefore probably through the east part of Simmerston, so as to fall in with the north-west angle of the Fort of Bemulie, situated on the opposite bank of the river. This station, as well from its size as from the number of its envelopes, and the many vestiges of ruinous foundations within it, hath been one of the most considerable belonging to the wall, though the whole work is very much defaced. Its distance from New Kirkpatrick is 4600 yards. A little way to the eastward of Bemulie the tract of the ditch is again very visible, leading along the side, and partly through the inclosures and woods of Calder. Having crossed a brook, it issues from the inclosures near a fine rectangular tumulus or castellum, that hath been surrounded with a ditch, situated at the village of Calder. This place being 3600 yards from Bemulie, and therefore corresponding with what is found to be the mean distance of the several forts on the wall, hath generally been pointed out as the situation for one of the number. But though it is imagined by some that a station of the ordinary size stood on the ground now occupied by the village and church, yet as no vestiges of it remain, it seems doubtful whether the castellum above mentioned may not have been the only fort on this part of the wall. From Calder the tract of the wall continues along the top of the bank which overlooks the plain of the Kelvin towards Kirkintilloch, being every where

Roman Wall.

Roman Wall.

visible, excepting about the middle of this space, where it crosses a small brook, and again on its arrival near the last mentioned place. There can be, however, no doubt of its having passed to the southward of the fort called the Peel, situated just in front of it; and which, though small, yet, with respect to the depth of its ditch, hath been one of the strongest appertaining to the whole work. Foundations of old buildings may he seen within the area, and its distance from Calder Castellum is 4450 yards. At the east end of Kirkintilloch the vestiges of the ditch are again to be perceived following the course of the bank above the Kelvin, but they disappear on approaching towards the Fort of Auchindavy, which is distant from the Peel 2970 yards. This station, though now very much demolished, hath originally been covered with three envelopes. The military way, or branch of it, passes through it; and old foundations may still be observed within its area. In May 1771, a pit about nine feet deep, just without the south-west angle of the station, five altars, a broken statue, and two large iron malls, were discovered. Four of these altars are inscribed by Marcus Coccius Firmus, a centurion of the second legion. The whole are now deposited in the college of Glasgow. From Auchindavy, the wall having passed a small rivulet, continues along the rising ground by Skerry dike; thence crossing Skerry brook, it hath led, though now invisible, through inclosed fields, towards Twacher, where its vestiges, as well as those of the military way, again become conspicuous, and then ascend Barhill; on the lower summit whereof, towards the south-west, the station is situated. Barhill, standing near the middle of the isthmus, and being considerably elevated above the level of the plains below, therefore commands a very extensive prospect. The fort, which is a little way detached from the

south side of the wall, was probably one of those previously erected by Agricola. It is surrounded with double ramparts, contains many ruinous foundations within its area, whose vestiges, however, are not now so entire as represented in the *Itinerarium*, and it is distant from Auchindavy 8450 yards. Hence the wall proceeds in its course around the north side of the easternmost summit of the Barhill, and in descending crosses two small rills, between which some appearances of the rampart and parapet may be discerned. Having passed along the lower grounds, which are at the same time uneven, it then ascends Croyhill, and making several short bendings along its summit, comes to Croyhill Houses; which being distant from the station at Barhill 3200 yards, the situation, in other respects, answering for the position of a fort, and inscriptions having been found at the place, render it, upon the whole, highly probable that here a station formerly stood, though now it is totally levelled. Descending from Croyhill, some faint and imperfect vestiges of the rampart may be perceived near Eastern Dullater. Thence the wall keeps under the high grounds which lie on the south, having nevertheless a slope from it northwards to the Dullater Bog; and in this manner continues to the station at Westerwood, distant from Croyhill 3080 yards. This fort, besides being small, is inclosed within a single rampart and ditch only. Beyond Westerwood the wall still continues along those rising grounds which front the Dullater Bog, and a small river called Bonny; and having, in some particular places on the heights, slight vestiges of the rampart and parapet; then crossing the Redburn, it falls in with the north side of Castle Carey Fort, which hath been fortified with a double rampart, and which is distant from that of Westerwood 3320 yards. We have already had occasion to take notice (says General Roy), that this station is one of

Roman Wall.

Roman Wall.

the most considerable along the whole course of the wall, offering, at the same time, some reasons for supposing that it may have been the *Curia Damniorum* of Ptolemy. It is the only one of those, *per lineam valli*, to which we have ventured to assign any name; for, tho' very probably all of them may be comprehended in Ravenna's list, yet his names of ancient places seem to be so much corrupted and misplaced that it is impossible even to guess at their true situations. Near Castle Carey, some few years ago, a stone was found in the wall, inscribed to Anoninus Pius by the first cohort of the Tungrians, who executed a part of the work. The foundation of the ruinous building situated in the south angle of the fort, having been cleared of the rubbish in 1769, discovered a very elegant plan of a house in the style of Palladio, with a *sudorium* or warm bath belonging to it. In one of the apartments an altar was found, dedicated to Fortune by the vexillations of the second and sixth legions, who probably composed the garrison. Near it was likewise dug up a stone in alto relievo, with the figure of the goddess, having a wheel in her hand. From the number of human bones found in several of the apartments just now mentioned, it would seem that the fort had been taken by storm, or perhaps surprised in the night, by the Britons, who had put the garrison indiscriminately to the sword; and as a great quantity of burnt wheat was likewise discovered near the north-west angle of the station, it would appear that after the massacre the place had been set on fire. From Castle Carey the wall keeps on its usual course along the slope of the commanding ground, having the Bonny in front. Near a place called the Dike something like a small tumulus exists in the ditch; and, further on, faint vestiges of the rampart may be perceived. Having passed

through Sebeg wood, it comes to the house of that name situated on the south bank of the ditch; and either here, or at Dick's House, a little more to the eastward (which is likewise called Mill Quarter), there hath been a station. From Castle Carey to Sebeg house is 3300 yards. The wall, having passed Dick's house, comes to the Chapel hill, which is a small castellum, situated on the north side of the ditch, and surrounded with one of its own. Between this place and the traces of an old watch-tower near Elf hill, according to tradition, Græme, with his Britons, broke through the wall; from which circumstance it might possibly have the name of Græme Dike. Continuing eastward, and crossing Roundtree burn, we come to the station called Rough Castle, which is the last, that is, the easternmost, now existing on the wall, and distant from Sebeg house 2860 yards. This station consists of two divisions, whereof the principal one seems that towards the west, as it is surrounded with a triple envelope. The eastern part was probably an addition for lodging a greater body of troops when on some particular emergency the wall was repaired; and within it some foundations may be seen. Roman Wall.

"From Rough Castle eastward to Gilmor Seat, and some little way beyond it, is now the most entire part of the whole wall. Beyond this, opposite to Tamfour hill, the Roman way leading to Camelon hath issued from the wall. From the sortie of the Roman way the wall continues its direction, and having crossed Tamfour burn, ascends the ridge whereon the house of Bantaskin is situated, 3430 yards from Rough Castle. From Bantaskin, continuing along the ridge, the wall appears to have passed through the grounds now occupied by the gardens on the south side of Falkirk. Beyond these its vestiges

Roman Wall.

become again very distinct in leading across the plantations and avenue of Callander house; thence having passed a small brook, it hath proceeded 'by the village now called New Merchieston. Hence the wall no doubt led by the Mumrills; and having crossed Edinbelly burn and that of the Weddings, it hath passed along the rising grounds whereon Polmont church is situated. Having then passed another small brook near Millhal, it hath mounted the bank, and kept along the heights between that place and the river Avon, where some faint appearances of the ditch may be discerned. It seems to have passed the Avon at a place called Bankend, and then ascends to the village of Inner Avon, where there is an ancient tower, and is supposed to have been a fort 4400 yards from New Merchieston.

"Between Inner Avon and Kinneil some very imperfect traces of the ditch are discernible in particular places; and it is likewise imagined that a station formerly stood at Kinneil House, 3400 yards from Inner Avon. To the eastward of the inclosures of Kinneil, a slight vestige of the ditch may be perceived, and another on the south side of those of Grange; beyond which no remains of any part of the work are now to be discovered; though it is very probable that the last or nineteenth fort may have stood on the height behind the kirk of Carridden, distant from Kinneil 4050 yards. The total length of the wall was 63,980 yards, and it was defended by nineteen forts; the medium distance between which was 3554½ yards, or something more than two English miles.

"The situation of Dunglass Castle, beyond the west end of the wall, where there is deep water in the Clyde, hath already been taken notice of as what probably formed the Ryman port on that side of the island. Blackness Castle hath much such another situation on the Forth two miles

Drawn by Hollar

Engraved by G. Cooke

BLACKNESS CASTLE, FIFESHIRE.

east from Carridden, and about one and three quarters west from Abercorn. It seems not, therefore, unlikely that this may have been the Roman port on the Forth; and if so, it would be covered with a fort where the castle now stands. The forts on this wall of Antoninus are closer together by one-half than those on the wall of Severus in the north of England. The stations of the forts and distances on the wall of Antoninus were the following: Roman Wall. Forts on the wall.

	Yards.
From the old church of Old Kilpatrick to the middle of Duntocher fort	3570
Thence to the Castellum of Peel Glen	2950
To Castlehill fort	500
New Kirkpatrick fort	2450
Bemulie fort	4600
Calder Castellum	3600
Peel of Kirkintilloch	4450
Auchindavy fort	2970
Barhill fort	3450
Croyhill houses	3200
Westerwood	3080
Castlecary	3320
Sebeg House	3300
Dick's House	440
Chapel Hill	300
West part of Rough Castle fort	2120
Gilmor Seat	1000
Sortie of the way to Camelon	1200
Bantaskin House	1230
Opposite to the middle of Falkirk	1400
East end of New Merchieston	3000
Carry over	52130

Antiquities.

Brought over	52158
Mumrills - - - - - - - - -	400
Inner Avon tower - - - - - - -	4000
Kinneil House - - - - - - - -	3400
Height behind Carridden Kirk - -	4050
Total - -	63980"

In the parish of Kirkliston is to be seen a remarkable monument of antiquity, known in the neighbourhood by
Cat Stane. the appellation of the *Cat Stane*, which has given its name to the farm on which it stands. It has abundantly puzzled several antiquarians. It is a single stone about 4½ feet in height above the surface of the ground; its circumference is 11½ feet; its form is that of an irregular prism; on the south-east front of it the following inscription is rudely, but deeply cut in the stone:

IN OC T
UMVLO JACI
UETTA D
UICTA

Abercorn Castle.

Near the site of one of the Roman forts is supposed to have stood Abercorn Castle. It was placed on a point north-east from the church at Abercorn. Under the Douglasses this became one of the fortresses of that powerful family. In the year 1454 it was besieged by King James the Second during his contest with that family. The king at one time raised the siege; but it was recommenced during the following year, and at length taken by storm. It was not afterwards repaired; and Buchanan speaks of it as ruinous in his time. The most ancient monastery in Scotland was one built at Abercorn. It is frequently mentioned by Bede; but there is nothing recorded in later history concerning it. In the parish of

Torphichen, a little to the north-east of the village, is the hospital or preceptory of Torphichen, the principal residence of the knights of St John of Jerusalem. There is only the choir of the church remaining, all the rest of the houses being razed except a square tower. There are two wings, one on the south and the other on the north side, and evident marks of other two on the east and west. On the inside are three beautiful Gothic arched domes, the middle one supported by some Gothic columns. The windows are large and Gothic. In the south wing is a niche for laying the dead during funeral service, and likewise the font for baptism. It was founded by King David the First. This preceptory was a place of refuge; and the limits of the sanctuary are supposed to have extended to the distance of a mile in every direction. There is a stone in the church-yard as a centre, and four others, at the distance of a mile, towards the east, west, south, and north, with a St John's cross upon each. In the same parish, about a mile eastward from the village, stand four great unpolished whinstones, supposed to have been what is called a druidical temple. According to tradition, sacrifices were anciently offered upon them. Antiquities.

The parish-church of Dalmeny is worthy of notice, on account of its apparent antiquity, for nothing is known concerning the date of its construction. It seems to be of that sort of architecture called Saxon, which is a middle sort between the Grecian and the Gothic. It is a small fabric of hewn stone, eighty-four feet long and twenty-five feet broad, with its eastern part rounded. The windows have the general appearance of Greek architecture; but, on examination, the shafts are too thick for the height, and the capitals are Gothic. The eastern half of the church is vaulted with semicircular arches, adorned Dalmeny church.

Antiquities. with mouldings chiefly in the form of stars and other embellishments.

Nearly a mile to the westward of Barnbougle, on the sea-shore, on the summit of a high bank, are the remains of an ancient cairn. It was at one time of great bulk, no less than twenty-four feet of height in the middle, and five hundred feet in circumference. It consisted of small stones, which appear to have been carried by the hand from the neighbouring grounds. It receives from the country people the name of the Earl Cairnie. The greater part of the stones have been removed for other purposes. About two miles to the westward of this, that is, to the westward of Queensferry, are still to be seen some remains of a monastery, which was founded in 1330, for the Carmelite friars, by one of the lairds of Dundas. This family is said to possess a charter granted as far back as the year 1120.

The population of the county stands thus:

Parishes.	Population in 1755.	Population in 1790-8.	Population in 1801.					
			Persons.		Occupations.			
			Males.	Females.	Persons employed in agriculture.	Persons employed in trades, &c.	All other Persons.	Total of Persons
Abercorn.....	1037	870	399	415	133	48	633	814
Bathgate.....	1594	2309	1158	1355	377	346	1790	2513
Borrowstounness	2668	3178	1210	1580	180	256	2354	2790
Carridden.....	1164	1450	625	868	93	197	1203	1493
Cramond, Lingow Division	—	—	4	4	—	—	8	8
Dalmeny.....	1103	907	351	414	143	49	573	765
Ecclesmachan..	351	215	161	142	70	14	219	303
Kirkliston, Linlith. Divis.	1461	1504	556	650	829	247	130	1206
Linlithgow....	3296	3221	1680	1914	1320	1722	552	3594
Livingston....	598	420	248	303	63	44	444	551
Queensferry...	451	505	186	268	9	91	354	454
Torphichen...	1295	1069	483	545	286	443	299	1028
Uphall.....	690	600	381	405	73	26	687	786
Whitburn.....	1121	1322	687	850	590	346	601	1537
Linlithgow Jail	—	—	—	2	—	—	2	2
Total....	16829	17570	8129	9715	4166	3829	9849	17844

Several of the most distinguished families in this county have been connected with the profession of the law, and have risen by means of it. It has also produced several other names mentioned in Scottish history. Colonel Gardner, whom we formerl, mentioned as having fallen in the battle of Prestonpans, was born in the parish of Carridden. He was rendered popular in this country, not only by his courage but by his piety, which was celebrated after his death in a treatise published by his friend Dr Doddridge. Thomas Dalziel of Binns, one of the ancestors of the family of that name in the parish of Abercorn, was com-

Eminent persons.

Eminent Persons.

minder in chief in Scotland during the reign of Charles the Second, and part of that of James the Seventh. He was distinguished by his intrepidity and his fidelity to the government that employed him; but was rendered the minister of much of that sanguinary severity which in these unhappy times ultimately rendered the house of Stuart so odious in this country. The families of Hope and Dundas, whose chiefs or most ancient branches hold property in this county, are sufficiently known on account of the distinction to which many of their members have attained in the profession of the law, or in the management of public affairs. The celebrated Earl of Stair, a nobleman equally distinguished by his talents in the field and in the cabinet, resided during twenty years, after his recal from his embassy at Paris in 1720, upon the estate of Newliston in this county, which he inherited from his mother. He laid out the pleasure-grounds upon the property, and planted and adorned it. Some people have thought that military ideas are to be discovered in the disposition and arrangement of every thing there. He was buried in the church of Kirkliston, but no monument marks the spot where his ashes are deposited.

This county partakes, in every respect, of the general character of the Lothians. Commerce and manufactures do not exist in it in any degree proportioned to the materials or advantages which nature seems to have bestowed upon it. It is situated on the shore of a navigable frith; it abounds with those minerals which are most valuable, because most necessary to the accommodation of mankind. The soil is also capable of improvement; and much of it has been highly improved and ornamented; but agriculture is the only employment which has hitherto been carried on with distinguished success. It is singular, that on the western side of the Shotts hills, towards

BRIDGEHOUSE CASTLE.

LINLITHGOWSHIRE

Glasgow, every sort of commercial or manufacturing project is pushed on with intrepidity; but on crossing these hills to the eastward, that is, towards Edinburgh, similar means and materials do not stimulate to a similarity of exertion.

CLACKMANNANSHIRE.

ADVANCING northward, we now cross the Forth, and shall proceed in our description along the north-eastern coast of Scotland, in the first place, on account of the resemblance which both the face of the country and the original race of people bear to those already described; reserving, as much as possible, the north-western country of Scotland, or the Highlands, for the latter part of our work. It is perhaps not easily possible to give a better idea or general view of the situation and aspect of the counties which remain to be described than that stated by General Roy in his Military Antiquities of Scotland. After describing shortly the mountains which run northward from Northumberland into Scotland, and proceed eastward between East Lothian and Berwickshire, and westward along the head of Dumfriesshire and Galloway, he proceeds thus:

"Beyond or on the north of these united chains of hills, the principal part of the Lowlands of Scotland are situated, extending quite across the island from sea to sea, and reaching as far as the Grampian mountains; that stu- Chains of mountains in Scotland.

General Description.

pendous and seemingly impenetrable barrier, which, like a mighty wall, stretches along the southern part of the Highlands. Into this extensive plain the friths of Forth and Clyde indent themselves from opposite seas, thereby forming that remarkable isthmus which is by far the narrowest part of Britain; and along this neck of land the Romans conducted their second wall. But besides many detached hills situated in this level tract, there are two ranges, which though by no means so formidable as the Highland mountains, yet seem conspicuous in a low country, and therefore deserve to be mentioned. The first is composed of the Pentland hills, which, beginning near the Frith of Forth on the east, run westward, and end at the borders of Clydesdale. The second is of equal extent with the Grampian mountains, to which it is nearly parallel, beginning at Stonehaven on the German Ocean, and running south-west across the island, for the space of 112 miles, to Dunbarton on the Frith of Clyde. This long range is subdivided into three principal sections. That towards the east extends as far as the Tay, under the general name of the Sidlaw hills. The Ochil mountains form the centrical part thereof between the Tay and the Forth; and from the Forth to the Clyde its western division is continued under the names of the Kilsyth and Campsey hills. Though the long valley comprehended between the Grampian mountains and this smaller range may be denominated in general Strathmore, signifying the great strath or valley; yet Strathmore, properly so called, is situated in the eastern division of it between Stonehaven and the Tay. The Highlands of Scotland comprehend that immense tract of mountainous country reaching from the Grampians quite to the extremity of the island. This high and rugged region is in several places intersected with friths and chains of lakes, forming so many

natural divisions of the country. Of these, two are more remarkable than the rest. The first, or principal one, is that which extends almost in a direct line from Inverness, on the Murray Frith, to the arm of the western ocean called the Linnhé Loch, whereon Fort William is situated. The second opens likewise into the Murray Frith, extending from thence along the Frith of Dornock and Loch Shin to Loch Laxford on the west sea. Naturalists have observed, that the ranges of mountains or high lands, whether on continents or islands, over the face of the whole globe, which run nearly in a meridional direction, are always situated next to the western shore, and consequently have their steepest face presented that way, sloping gradually towards the east. Some have even attempted to assign the primary cause to which this wonderful circumstance is owing. Without, however, entering into any speculative disquisition concerning that point, we need only take notice that this is remarkably the case with regard to the island of Great Britain; for here the highest lands throughout its whole length are situated nearest to the west coast, having a gradual descent towards the east, which is in general a flat and level shore. Accordingly, we find that the mountainous region of Scotland, comprehehended between the Grampians and the first or great chain of lakes, becomes lower as it approaches towards the east coast, in such sort that a very considerable part of the shores of Aberdeen, Banff, and Murray, watered by the Dee, Don, Ithan, Devoran, Spey, and Findhorn, as far as the river Ness, is in general a low and a level country. General Description.

"Beyond the Murray Frith the same sort of low land continues along the coast of Ross and Sutherland; becoming, however, gradually narrower till it terminates in a point at the Ordhead. At this promontory the shire of

General Description.

Caithness begins, which jutting out between the German and Northern oceans, thereby forms the north-east angle or extremity of the island. The surface of this county, excepting its interior parts, which are high and mountainous, is in general level, and therefore in many places of a morassy nature."

District once called Ross.

To return to Clackmannanshire. That tract of territory which is bounded on the south by the Frith of Forth, on the east by the German Ocean, on the north by the Frith of Tay, and on the north-west by the Ochil hills, running in a north-eastern direction from the neighbourhood of Stirling to the mouth of the Tay, was in ancient times denominated Ross. It is a sort of peninsula, defended towards the land or north-western side by the chain of mountains called the Ochil hills. At present the principal part of it is the county of Fife; but two other small counties, those of Kinross and Clackmannan, are formed out of the north-western part of it. Between these two small counties a part of the shire of Perth crosses the hills southward, and encroaches upon this district. The political divisions of the country are indeed here inconvenient and irregular. The parish of Alva, as formerly noticed, belongs to Stirlingshire, while, at the same time, it is divided from the rest of Stirlingshire by a very considerable part of the county of Clackmannan; for which reason we took no notice of it in our description of Stirlingshire, and here, under Clackmannanshire, shall mention such remarkable objects as it contains.

The county of Clackmannan contains about 30,720 English acres, or nearly 24,975 Scottish acres. It is situated between 56° 5′ and 56° 14′ of north latitude, and from 33′ to 56′ west of the meridian of Edinburgh. It is bounded on the south-west by the Forth, which di-

vides it from Stirlingshire, and on the south-east by Fife. On the other quarters it is bounded by Perthshire. Mountains.

The Ochils are the only hills, or rather mountains, of this district. They rise, in general, very abruptly from the valley, and form a fine defence against the north winds to the cultivated district of the county, which lies between them and the Forth. The south side of these mountains, in the western part of the county, is very steep, and in some places almost perpendicular; exhibiting, however, amidst the rocks, some patches of grass, and even a few of corn. To the eastward, however, the face of them is green, with spots of moor or moss towards the summit of one or two of them. The northern exposure of these mountains contains moss and heath; which last, however, is decreasing, in consequence of their being of late years pastured with sheep. The most remarkable of the Ochils in this district are, Demiat or Dunmyat, in the parish of Logie, and Bencleugh, in the parish of Tillycoultry. Dunmyat advances a little into the plain. The side to the south is rocky and almost perpendicular; and the height of it, according to Mr Stobie, is 1345 feet. This hill affords a most remarkable bird's-eye view of the Carses of Stirling and Falkirk, with the river Forth meandering through them. Bencleugh is situated in the centre of the hills; and is the highest hill, not only in this district, but of all the Ochils, being, according to Mr Stobie, 2450 feet in height. It is, towards the south, covered almost to the very summit with fine grass. The prospect from it is very fine, and most extensive, as no height intervenes even to the German Ocean, and the country it overlooks is in general pretty fertile, and tolerably well cultivated. Bencleugh is, in that part of the district under consideration, denominated the Alva hills. These are divided into three separate hills, called the Wood- Ochils.

Waters. hill, Middlehill, and Westhill of Alva. On the brow of this last hill is a very high perpendicular rock, which, for what reason is not known, has obtained the name of Craigleith. It has been long, beyond memory, remarkable for the residence of that species of hawks called the *falcon*, which is used for the diversion of hunting. One pair, and only one pair, as affirmed by the inhabitants of the place, build a nest on the front of this tremendous rock. These are said to hatch their young annually, and when their progeny are of a proper age, the parents force them to seek a new habitation; till at last, however long they may be supposed to live, the parents themselves must yield their residence to their survivors. In former times, when that sport was in fashion, a hawk of this breed was thought a valuable acquisition.

Forth. The Forth, which forms the southern boundary of this county, is the only navigable river connected with it. Its singular windings below Stirling form the boundary of Stirlingshire and Clackmannanshire. The river begins to expand considerably near the village of Cambus, where the water of Devan falls into it, and begins to vary in breadth from one-fourth of a mile to a mile. Between Cambus and Alloa it contains three islands, one of which is of considerable extent. They were formerly covered at spring-tides; but one of them has lately been inclosed with a wall or sea-dike. Above the largest island a stratum of rock crosses the bed of the river, forming a ford at low water during spring-tides. This ford is seldom attempted; but it forms a sort of bar to the navigation, as vessels above sixty or seventy tons burden do not venture to cross it, and the Forth here becomes rather an estuary than a river. It may be proper here to remark, that it has a peculiarity, with regard to its tides, which deserves attention; but which, like most matters con-

Singular tides in the Forth.

nected with that curious subject, is sufficiently inexpli- Waters.
cable. For several miles, both above and below Clackmannan, the tides exhibit the following phenomenon, called by sailors a *leaky tide*. It happens always in good weather during the neap-tides, and sometimes also during the spring-tides if the weather be uncommonly fine. When the water has flowed for three hours, it then runs back, for an hour and a half, nearly as far as when it began to flow. It returns immediately, and flows, during another hour and a half, to the same height it was at before; and this change takes place both in the flood and ebb tides: so that there are actually double the number of tides in this river that are to be found any where else. In very boisterous weather, however, these leaky tides are by no means regular; the water only swells and gorges without any perceptible current, as if the two tides were acting against each other. The cause of this singular phenomenon in the tides of the River Forth may be a subject of inquiry to the philosopher, for it has not as yet been discovered. The same phenomenon is noticed by Sir Robert Sibbald, in his History of Fife and Kinross, in 1710.

In this county is the river called the Devon or Dovan, Devan.
which deserves notice on account of its very singular course. It rises in the parish of Blackford, in the county of Perth, a little to the northward of Clackmannanshire. The head of it is situated in 56° 13′ north lat. and 38′ west of the meridian of Edinburgh. It runs eastward through the Ochils for about eleven miles and a half, and then makes a very acute turn towards the west, and waters the small but pleasant vale of Devan, almost in a parallel line with its course among the hills. It falls into the Forth at the village of Cambus, which is situated about 56° 8′ north lat. and 39½′ west of the meridian of

Waters. Edinburgh: So that this river, whose source is not distant above six miles in a straight line from its mouth, runs a course of twenty-six miles, without attempting to reckon the almost innumerable windings it makes in its progress. This river is uncommonly beautiful. In the last half of its course it descends westward, along the southern front of the Ochil hills, and forms a general receptacle for the innumerable streams that proceed from these mountains. Its waters are pure and limpid. Its channel, at a medium, is about 100 feet in breadth in the middle of its course. To the eastward of this county, it passes through the singularly romantic scenery produced by what is called the Rumbling Bridge and the Cauldron Lin. In consequence of its vicinity to the mountains, it is liable to be suddenly swelled by heavy rains, which descend in torrents from the hills, and cause it suddenly to overflow the beautiful valleys around it. In general it is only a small river; large enough, however, to be rendered navigable if its channel were properly cut. In 1766, Mr James Watt, engineer, made a survey of it, and reported that this river was capable of being made navigable for several miles, at an expence of L. 2000, to the effect of bringing 10,000 acres of coal to the neighbourhood of carriage by navigation. The Devan abounds with excellent trout and par. In its dead pools pikes and eels are found. Salmon also come up from the Forth in considerable numbers; and in spring and autumn abundance of sea-trouts are also found here. In the bed of the river pearls of a small size have been discovered; and swans have resorted to its banks in severe winters. The streams or burns which flow from the mountains southward into the Devan abound with trouts of the finest quality, and at times are caught in great numbers. It is also to be remarked, however, that in

one of these rivulets, called Gloomingside Burn, which has fine streams and pools, no trouts have been discovered. Live trouts have even been put into it; but it does not appear that they were capable of living there; at least, they did not multiply, and were never again discovered in it. Waters.

In the lower part of the county is another river, called the Black Devan. It rises to the eastward, in the hills of Salmine, in the county of Fife, and flowing westward in a direction nearly parallel to the Devan, falls into the Forth in the parish of Clackmannan. Two lakes or aqueducts are also taken off from it; one of which drives an engine on the Clackmannan coal, and the other supplies a great reservoir which drives the engine on the Alloa coal. This reservoir goes by the name of Gartmorn Dam; but it is in fact a small beautiful lake of 130 acres in extent, having a little island in the middle of it, and abounds with perch, some pike, and various kinds of trout. Part of it is in the parish of Alva, but by far the greatest part of it is in the parish of Clackmannan. There is another small lake in the same parish called Tullygurth Dam, consisting of forty-five acres in extent, where a few fish are sometimes to be found. In time of great drought, also, the river Black Devan at one place forms the appearance of a small lake, by having its waters collected together for the supply of the mills and coal-machinery. Black Devan.

To understand correctly the nature of the soil of this county, it is necessary to attend to its form and surface. The Forth runs along the southern part of it in a direction which upon the whole is towards the south-east. On the other hand, the Ochil hills run along its northern side in a direction towards the north-east; so that the mountains and the river diverge from each other. We Soil.

Soil. have already mentioned the general aspect of the mountains. To the southward of them is the vale of Devan. Betwixt it and the foot of the mountains, the soil is in general of a light character and fine quality, but not very deep, and of a gravelly bottom. The haughs of the Devan are in general rich and fertile, or might be rendered so. The soil is deep, but with a mixture of sand. Proceeding southward from the Devan, the country rises, and the soil is less valuable, with much of that clay bottom which is scarcely penetrable by water, and which is so generally found in districts containing coal and freestone. Gradually from this, the country descends towards the Forth, along the whole of which is a level tract, consisting of rich carse land of the finest sort of alluvial territory, being a part of the Carse of Stirling. These lands form the finest part of the fore ground of the extensive view from Stirling Castle towards the east.

Climate. With regard to the climate of this district, it may be remarked, that its western angle consists of a part of the parish of Dollar. Proceeding eastward along the Ochil hills are the parishes of Alva, Tillicoultry, and Dollar. In the southern part, along the Forth, are the parishes of Alloa and Clackmannan. In the low grounds in the parish of Logie, snow commonly lies but a short time; though upon the hills the case is frequently otherwise. In the parish of Alva the air is rather moist, and tolerably warm in the plains. The snow seldom lies in the vale of Devan; but the Ochils are often sprinkled, and sometimes covered pretty deep with it. Near the summit of the hills, there is a particular spot which is so much shaded that the snow lies there very long, sometimes even to the end of May. The country people call it, from its resemblance to linen laid out to whiten, *Lady Alva's Web*. The reflection from the rocks in summer makes

the air often very hot about the house of Alva, though it is pretty much elevated above the plain. The rocks run almost perpendicular from the house; the greatest part of them is covered with trees. About forty years ago, attempts to cover the hills to a considerable height were made, and in time will probably succeed, which will be of great ornament to the country; but the elevation is so high, that the progress of the vegetation is but slow. The climate in the parishes of Tillycoultry and Dollar, particularly at the foot of the hills, resembles that in Alva. The rain that falls is not very copious, and on account of the gravelly bottom of the vale does little hurt. The snow never lies long there, though that on the hills often does, and even remains in particular places till an advanced period of the year. The climate of the high land south of the Devan is considerably colder and wetter than in the vale; and the moisture is likewise more severely felt, as the bottom is a retentive till. In the parish of Clackmannan the climate in the low grounds is pleasant and drier, as well as warmer, than on the high grounds, especially those which lie on the north and east part of the parish. The climate in the parish of Alloa is pretty much the same as in the parish of Clackmannan. The higher grounds, indeed, are not quite so cold or moist as the northern or eastern parts of Clackmannan. Upon the whole, the climate of the district under survey is certainly rather moist. It is partly owing to this circumstance, and partly to the greatest part of the soil, that readily absorbs, and for a long time retains moisture, that the preparation of the ground for the seed in the spring is frequently so much interrupted, and so long postponed, that the harvest is rendered late; a circumstance, the bad consequences of which are too generally known. The wheat harvest, however, in those parts of the district where wheat

Climate.

State of Property.

is sown, is often as early as in the Lothians; but this forwardness proceeds entirely from the wheat seed being sown earlier.

Numerous feus.

In this district and its neighbourhood are a considerable number of small properties held to perpetuity by the tenure called *feu*. In ancient times it was usual for men of rank to grant possessions upon their estates to persons who were their near kindred, or meant to be favoured as such, at a low rent, without expressing any term at which the possession was to terminate. These possessors at a late period were termed *rentallers*, or *kindly tenants*. The grant was frequently renewed in favour of the heir of the party, who, when received as a vassal, usually paid a fine to the superior, and was understood to have a right to possess for life. In earlier times, such rentallers being the military vassals of their chief, did not consider themselves as more liable to be removed from their possessions, than the chief could be removed by the king from his property. In lawless times no chieftain could hold his property safe from the encroachments of his neighbours, unless defended by a numerous train of vassals, and the vassals well knew that their swords formed the tenure by which their chief and themselves held their property. When at last the dominion of law began to prevail, which took place first in the neighbourhood of the Forth, the Tay, the Clyde, and to the southward, the great proprietors found their vassals of no use, unless in proportion to the rents which they paid; they began therefore to let their lands to the highest bidder: and by the means of dilapidating or transferring property, which commerce introduced, new men became purchasers or proprietors of lands, who were strangers to the ancient inhabitants. The Scottish lawyers, in their interpretation of rights to property of land, adopted the ideas which had

been established on the continent relative to the feudal system. By that law the king was held to be the sole proprietor, and to have the full disposal of the national territory; and no individual could dispute his right to any portion of it, who could not produce a grant or charter from the king himself or one of his predecessors. The lawyers adopted the same notion with regard to the nobles, or feudal chiefs, who held extensive grants of lands from the crown. The chief was absolute owner of his own lands, and could expel every individual from his territory, who could not produce a written grant from him or his predecessors, authorising the vassal to retain the property for ever. In the times of the feudal aristocracy, however, or rather in the ancient state of Scotland, these notions were rather the speculative ideas of lawyers than descriptive of the actual mode in which lands were held. The king would have vainly attempted to eject from his property a Douglas or a Scot, a M'Donald, a Cumming, or a Graham, under pretence that these chiefs could not produce regular charters to their lands. Such a pretension, to render it effectual, must have been supported by mercenary armies, which no king then possessed; and to have brought it forward without such a means of support, might have proved fatal to the prince upon the throne, by exciting against him a combination of his barons. Robert Bruce himself at one time had rashly ventured to require his barons to produce the charters by which their lands were held; but even that brave and popular prince, the avenger of his country's independence, was fain to retract as speedily as possible the pretension which he had rashly brought forward. In like manner, a baron who should have attempted to eject the ancient vassals of his family, and to receive in their stead strangers who would

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pay a higher rent, or who should even have attempted much to augment the rents of his estate, would speedily have excited a combination against him of those by whom he ought to have been protected. If his vassals did not themselves seize and destroy his person, and assume his next kinsman as their chief, his next powerful neighbour, knowing his situation, would not hesitate to invade his property; and in the hour of peril he was sure to fall, deserted and betrayed. But when the dominion of law came to be established, and vassals found that their lords could effectually, and under the protection of government, sell their lands to a stranger, who could assume possession, raise the rents to the utmost value, or expel the ancient tenants of the soil, they became anxious to obtain the security of those written grants whose validity the law acknowledged. The greater barons had always been accustomed to receive charters from the crown; because, though not absolutely necessary to a powerful chief in the days of his prosperity, yet they tended to engage the sovereign as a protector to the family, in case of an unsuccessful contest with a neighbouring baron, or the succession of a minor heir. They also kept alive claims of property when a chief was dispossessed by superior force. Hence they were the refuge of the weak, and in turbulent times they afforded a pretension which fortune sometimes rendered effectual in the hands of a bold adventurer; but the vassals of the barons, from their want of literature, and from their being immediate occupiers of the soil, seldom demanded written charters from their lord. About the time of the reformation from popery, however, and in the beginning of the succeeding century, the state of matters altered greatly, and it became, in many parts of the country, a sort of fashion for great proprietors to grant feus of considerable portions of

Origin of numerous feus.

their estates. Some proprietors did this to conciliate the attachment of their vassals, which was still of some degree of value; others, from generosity, were willing to deprive their successors of a power which they detested, to expel from around them the faithful adherents to the fortunes of their family; a third class were tempted to do the same thing for a considerable pecuniary payment, which the vassals had found means to accumulate. The catholic clergy, at the time of their expulsion, raised money by making grants of the church lands in this way, and the nobles imitated their example. State of Property.

In the district now under consideration a considerable number of feus still exist. The family of Argyle possessed property in this neighbourhood, and made perpetual grants to its vassals in the way alluded to; and its ancient residence will be afterwards noticed. One feu in the parish of Dollar, extending to no less than 200 Scottish acres, is held under this condition, that the feuar or tenant shall be bound to slaughter all the cattle that may be wanted for the use of family of Argyle in their residence of Castle Campbell. About the end of the sixteenth, or beginning of the seventeenth century, a Lord Colvil, who was proprietor of the estate of Tillycoultry, divided about four-fifths of the arable land into forty feus, each of which consisted on an average of about thirty Scottish acres. There are about seventeen or eighteen of these feus still remaining. One gentleman has eight of the forty parts, with a right of sending sheep to the Ochils; three farmers have each two of them; two others have one each; and one man has one and a half of them. All the parish of Dollar was possessed by the rentallers, or kindly tenants, of the family of Argyle. Most of these tenures were converted into feus in the year 1605. They were of various sizes,

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from ten Scottish acres to 200. What was called the Mains of Dollar were divided into eight oxengates; and on a recent division before the sheriff they were found to contain from thirty to forty-five Scottish acres each. Where no such feus exist, however, the lands belong to large proprietors. The whole parish of Alva belongs to one proprietor. The farms are not large. In the Carse there are few above eighty Scottish acres.

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